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Prospects for Progress in Home Economics Education

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THERE are two distinct methods of approach to the topic under consideration. The first is to state directly the trends which seem to offer greatest opportunity for progress in home economics education and to marshal facts in their support. The second is to give a picture of present conditions and tendencies in home life and to indicate their implications for home economics education. The latter approach is the one selected here, and the materials of this paper will be presented under three main questions: (1) What changes are coming about in the family as a social institution? (2) What are the fundamental bases of family life? and (3) What are the opportunities of home economics education in meeting present needs?

What changes are coming about in the family as a social institution? To understand the changes in the family as a social institution, one must obtain perspective by comparing the present conditions with those of two or three generations ago.

1. *The family no longer a compact social unit.* There was a time when it was a complete social unit. All of the wants of the members of the group were satisfied through the institution. Food, shelter, clothing, and recreation were provided by the members with little assistance from outside agencies. Now industry is no longer carried on in the home. The construction of the shelter, the preparation of the food, the manufacture of the clothing, and the furnishing of recreation are activities largely, if not entirely, carried on outside of the institution itself. The satisfaction of recreational needs through participation in the physical activities of production have long since passed. The dependence of the individual upon the group for planning for his leisure hours is becoming

less and less. The tendency to intellectualize entertainment and to mechanize its transmission seems to be on the increase, so that the recreational activities of present-day youth are found in reading the funny pictures of the newspapers, attending moving picture shows, listening to the radio—all of a passive and non-creative type.

2. *The breaking down of the continuity of the family.* The old, compact, patriarchal family with the father as the governing head is passing out of existence. Concurrently there is a lessened influence of the family in the community and a decreased educational effect upon the children. When the family maintained a residence in a village for a number of generations, it built up an influence which was exceedingly marked in shaping the character of the community and in moulding the education of the offspring. With the coming of the industrial era, necessitating frequent change of residence from one location to another, such continuity is rapidly declining, thus lessening the interest of the group in the affairs of the community, the religious and character education of the children.

3. *The decided decline in birth rate.* In 1800 the average number of children per family was between six and seven. In 1930 the number is less than three, and probably only slightly over two. This decline is seriously affecting the family as an educational, recreational, and social institution. When families were large, much of the education of the members in social life came from contacts within the group. The younger children learned many things from the older brothers and sisters. With the tendency toward one or two children in the family, there is an increase in the probability that adequate experience in making normal social adjustments may be wanting. Furthermore, as the numbers decrease, the opportunity for the development of wholesome group recreation becomes smaller, inviting the individual to find his leisure-time activities outside of the home.

4. *The steady increase in the divorce rate.* In 1800, family life centered around the rearing of children. The basis of marriage was the ability of the individuals to carry on cooperatively the work of the farm and the home and insure the continuity of the family line. Matrimonial decisions were frequently made for the children by the parents. The prospects of the boy to own a farm and the ability of the girl to work were more often of greater consideration in marriage than love between the two contracting parties. At the present time marriage is ordinarily based upon romantic love, the interested individuals entering into the union with little influence and guidance from their elders. With the

increase in romantic love and the shift from the biological interval of approximately two years between offspring to the conscious selection of their number and time by the use of contraceptive methods, the large family is being replaced by the small family or by no family, with a resulting lessening of ties which bind husband and wife together and in the growth of a desire to achieve personal freedom through divorce.

5. *The changing status of women.* In the past the woman has taken the lead in the promotion of certain industries which have centered around the home. She first developed agriculture. When this was taken over by her partner, she organized the home manufacturing industries. When these were absorbed by the factories, she concentrated upon her housekeeping duties. With the tendency toward a new type of domicile in which housekeeping duties are minimized, her time is not needed in the actual management of the home, so that she looks for other activities to relieve her boredom. Of these, the two most important are entering industry outside of the home and developing clubs or other organizations of a semi-intellectual and recreational type, such as bridge clubs, Browning clubs, and child or social welfare organizations.

6. *The change in the type of family domicile.* In the days of the patriarchal family, the home was located in a house apart from every other family. Many times this house was situated some distance from its nearest neighbor. With the growth of industry and the tendency of people to congregate in cities, a number of homes are located in a small space within a community building much after the manner of the cliff dwellers in the Southwest. The statistical turning point in the nature of the family domicile came in October, 1929, when more than 50 per cent of the new home construction in America was of the apartment-house type.

7. *The increasing inequalities in family wealth.* Under an agrarian civilization the wealth of each family was relatively equal. One end desired was to own a farm, together with the necessary equipment for running it successfully. Another was to rear a number of children to go out into the world and continue the family line. This possibility was within the reach of a majority of families. Under our industrial civilization, there is a tendency to measure life in terms of money, to concentrate wealth in the hands of a few, to deny opportunity to large numbers of families in order that a few may be favored—so that the few who are rich are growing relatively richer and those who are poor are growing relatively poorer.

8. *The growing lack of equipment of parents to meet the present needs.* Under the family life of a few generations ago, it was possible for boys and girls to become equipped to meet the responsibilities in their own future family life by contact with the home life of their fathers and mothers. This condition can hold, however, only under an agrarian civilization where family life is comparatively static. With rapid change in the conditions of living, it is not possible for youth to acquire the knowledge of home and family life necessary to meet future problems by mere contact with and participation in family life as it exists today. Continuous training extending from early childhood into the mature years of adulthood is necessary as a basis for complete living under our variable conditions.

In spite of the changes which appear to be taking place in family life, the most obvious conclusions are that the family is still with us, is still intact as a social unit, has been one of the cornerstones of social progress, and probably will be an exceedingly important factor in shaping the character of civilization in subsequent centuries. Prospects for progress in home economics education cannot be ascertained by looking solely at the changes. They can be discovered only by searching for those permanent elements in family life which have persisted for generations and which must form the basis for evaluating and interpreting change and for building a new family life adapted to the new conditions of the modern era.

What are the fundamental bases of family life? Throughout the ages the family has had three fundamental reasons for its existence. These are:

1. To insure the continuance of the race. The primary purpose of the family is to perpetuate the race. From the dawn of civilization to the present, society has experimented with various means for insuring race continuity. The higher forms of animal life have evolved the monogamous family as the best institution for this purpose, and biologists believe that this fact alone will insure the continuance of the family as a social institution. There appears to be little danger of the family becoming a zoölogical garden or a stock farm.

2. To provide for the happiness of the individual members. Desire for comradeship brings individuals together in groups. This is found in the tendency for animals to herd together, and in human beings it reaches its highest form in the desire of one individual for the comradeship of another of the opposite sex. Comradeship began years ago in the mutual cooperation of male and female in the care of the young, and has expanded to include all human desires and aspirations supported by

mutual sympathy, appreciation, encouragement, and a common understanding of individual and group problems. Up to now, society has evolved no substitute for this primary social unit in satisfying the needs of the individuals for companionship and comradeship.

3. To furnish education of children and adults. The family has always been an important agency in the education of children. There seems to be evidence that in the days of the agrarian civilization the family was the most important institution in educational effect, surpassing to a large degree the school system organized for this purpose. At the present time, the family is still the most effective agency in educating children in right attitudes toward life, in character traits and practices, in religious outlook, and in the interpretation of the good life.

What are the opportunities of home economics education in meeting present needs? The real opportunity of home economics education lies in giving, to boys and girls, a comprehensive picture of the actual conditions that exist in present family life. This means insight into the evolution of present changes, knowledge of the bases upon which family life has rested and will continue to rest, and confidence in the home to meet the responsibilities imposed upon it by an ever-changing social environment. A program of home economics education designed for this must give:

1. A clear understanding of the sociological background of home and family life. Boys and girls should be acquainted with the biological evolution of the monogamous family, the function of the family in meeting some common social urges such as those of comradeship, the contributions which the family has made to the education of children, and its contribution as a unit to the stability and progress of communities and larger social groups.

2. A comprehensive view of the economic problems of home life. In the average home, the man is usually the wage earner, the woman the chief distributor of the income. It it absolutely essential that boys and girls be given an understanding of problems in maintaining the family income and expending it properly. The present program of educating girls in certain phases of the management of the family income with little regard for how it is produced, is slightly less criminal than allowing boys to enter matrimony with little knowledge of earning a living and less concerning the wise expenditure of the income. Mutual respect, sympathetic understanding, and helpful encouragement cannot prevail unless both individuals are educated to see the entire problem.

3. A clear insight into the psychological bases of comradeship and companionship. Comradeship and companionship are present between in-

dividuals only when each has the full confidence of the other. Such confidence cannot be acquired and maintained except as the problems of life are met and solved with certainty, in the light of the best evidence available at the time, and in the interests of all of the individuals involved for the longest period of time. Neither of the contracting parties can expect to have his decision the final one in all matters, as was the case in the patriarchal family. Furthermore, comradeship is supported by some common meaning or philosophy of life, necessary to give balance to judgment and to insure consistency of standards for the interpretation of problems.

4. An understanding of the relationship of the home to social life and recreation. The tendency toward individualized recreation of an intellectualized and passive type, while increasing with the machine age, indicates that the home is unable to compete with these types. The old types of individual and group recreations have been swept aside. The new ones adapted to modern social life have not been developed primarily by and for the individuals, the home, or the schools. Intelligent insight into the responsibility of the family for group and individual recreation, together with plans for developing both of these in the changing environment so that they will keep the family intact, should be of major concern in the educational program.

5. A clear understanding of the debt which each individual owes to the home for his education. In the earliest years of life the home attempts to give to each of the children strong, healthy bodies. As they begin to take on social experience, it attempts more and more to inculcate also desirable social, mental, emotional, and moral habits. In the solution it gives to the problems of family life, it lays before the children patterns or procedures in forming judgments which become important guides to subsequent action. It gives the individual confidence in himself, hope for the future, faith in humanity—all of which are of paramount importance in social adjustments.

6. A definite concept of the meaning of sex life and reproduction, together with their relation to a balanced personality and a full, rich, and complete life. Studies indicate that the present knowledge of sex life is obtained by youth largely from the street and is of the accuracy and comprehensiveness that the source would imply. The desire for reliable information from competent sources by adolescent youth is evident. The school must do its part in removing the old taboos and in providing this information which is more vital in the preservation of home life today than at any time before.

Home economics education faces the greatest opportunity of its whole history. The decline in importance of academic subjects, the increase in emphasis upon the education of the whole individual, upon conscious adjustments to changing social life, and the dependence of society upon the home for biological and social progress are all hopeful signs. Home economics education can utilize these favorable conditions to the fullest only as it develops its philosophy and broadens its program to give youth a vision of a new home in a new social life—constructive, pragmatic, dynamic.

A Laboratory Seal of Approval for a Gas Range

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MANY articles offered for sale are identified by a trademark, seal, or other distinguishing label for the guidance of the purchaser and the protection of the manufacturer. For years symbols of this kind have guided the buying habits of the public. They may be the mark of an individual or a corporation, or they may represent the integrity and good faith of an industry.

Some five years ago the gas industry introduced a new mark of identification—The Laboratory Seal of Approval. This seal is the mark of The American Gas Association's Testing Laboratory which was established in Cleveland, Ohio, in 1925. The laboratory occupies a modern fire-proof building having approximately 27,000 square feet of floor space and is the most completely equipped of its kind in the world. It was founded to insure the safe and economical use of gas, by exhaustive research on the different kinds and mixtures of city gases, by the establishment of basic requirements for safety and efficiency in the design and construction of common types of domestic gas appliances, and for the certification of equipment which had met such requirements as the result of test.

Approval requirements of the American Gas Association are prepared by committees representing the United States Bureau of Home Economics, the United States Bureau of Standards, the United States Bureau of Mines, the United States Public Health Service, The American Home Economics Association, National Association of Heating and Piping Contractors, Master Plumbers' Association, The Underwriters' Laboratories, and the Canadian Gas Association, together with leading men of the gas industry, representing gas companies and manufacturers of gas appliances. These requirements are revised and made more rigid as progress is made in the art of manufacturing gas appliances.

Up to the present, requirements have been drafted for gas ranges, space heaters (including radiant heaters, cabinet and circulator heaters, fire-place heaters, and radiators), water heaters, boilers, furnaces, clothes dryers, incinerators, flexible gas tubing, hot plates, and laundry stoves, and for house-piping and appliance installation. Among the other types

of gas appliances for which requirements are now being prepared are gas ironers, conversion burners, garage heaters, refrigerators, hotel and restaurant ranges, and high-pressure gas boilers. These requirements are designed primarily to assure safety in operation and a standard of efficiency and durability essential to safety. It is to be especially noted that beyond these minimum requirements a manufacturer may give free reign to his engineering ingenuity in designing a product of higher quality than that of his competitors. The fact that an appliance has been approved has no direct bearing on its selling price.

In the case of gas ranges, there are 159 separate tests made in determining compliance with the requirements, 127 of which cover the construction, design, and durability of the range. The other 32 tests are made for the purpose of determining compliance with the performance requirements.

The most important performance requirement from a safety standpoint is the one which states that a gas range shall produce no carbon monoxide. Tests for compliance with this requirement are conducted on three kinds of gases: natural gas, water gas, and coke-oven gas. The three types, representing practically all the kinds of city gases supplied throughout the United States and Canada, have widely different heating values, specific gravities, chemical composition, and operating characteristics. Thus, natural gas has a specific gravity of 0.65 and a gross heating value of about 1,135 Btu per cubic foot, while water and coke-oven gases have specific gravities of 0.70 and 0.40, and heating values of 400 Btu and 535 Btu per cubic foot, respectively. A test pressure of 7.0″ water column is used for testing natural gas and one of 3.5″ for manufactured gas. These gases are measured by wet test meters which are extremely accurate. The volume is then corrected to standard conditions: 30″ of mercury pressure and 60°F. (the standard to which the heating value determined by the Junkers type calorimeter is corrected). For the purpose of all tests, the normal capacities of gas range burners are defined as follows: for separate simmering burners, not less than 1,800 Btu per hour; for regular top burners, not less than 9,000 Btu per hour; for giant top burners, not less than 12,000 Btu per hour; for broiler burners, not less than 140 Btu per hour for each square inch of broiling area; and for oven burners, 10,000 Btu per hour per cubic foot of oven space, where such space does not exceed 2.4 cubic feet; where the volume of the oven is in excess of this amount, manufacturers have the privilege of specifying the rating, providing it is not less than 24,000 Btu per hour.

During all tests for compliance with performance requirements, the

gas range is not connected to a flue but must depend for satisfactory operation solely on the principles of design incorporated in it.

With the burners adjusted at the capacities specified above at normal gas pressure and with the air shutters adjusted to produce flames with well-defined inner cones, samples of the products of combustion are taken when the burners are operating at one-half normal pressure, at normal pressure, and at one and one-quarter times normal pressure. When testing the top burners for compliance with the above requirement, round pans $7\frac{1}{2}''$ in diameter are filled with water and placed centrally over the top burners. A properly designed metal hood is placed over the entire cooking top, and pipes leading from the pans protrude through holes in the top of the hood so that steam generated during the tests will pass off into the atmosphere and not become mixed with the products of combustion. The hood is so designed that the openings around these pipes can be closed off and all the products of combustion forced to pass through a single flue outlet in the top center of the hood. The burners are operated for a period of approximately five minutes, and samples of the products of combustion are then taken at three test pressures. The samples thus secured, are analyzed for carbon dioxide on an Orsat apparatus and for carbon monoxide on an iodine pentoxide apparatus which is accurate to 0.002 of 1 per cent.

Samples from ovens and broilers are taken at pressures of similar range. Where the oven and broiler are vented through the same flue and it is possible to operate both at the same time, they are tested together as well as separately. These tests are designed to anticipate the most severe conditions of service ever encountered in the home.

An oven thermostat is a device on a gas range which the housewife considers essential, once she has become accustomed to it, because if it is dependable, it eliminates the guess-work from baking. The accurate and satisfactory performance of the thermostat attached to every approved gas range is assured through extensive laboratory tests. The temperature indicated by the thermostat must correspond very closely with the actual temperatures within the oven.

How the heat from oven and broiler is distributed, is determined by actual baking and broiling tests. The baking test is made with biscuits mixed by a standard formula and evenly placed throughout the oven; the temperature of the oven is kept at 450°F., and to meet the test, the oven must bake all the biscuits evenly within 20 minutes. Similarly, the broiler must toast $\frac{1}{2}$-inch slices of white bread evenly distributed over the broiling area on a plane below the broiler burner, to a uniform color within a period of 10 minutes.

To make sure that the walls and floors near the range will not be scorched or overheated, fire hazard tests are applied. For these, the range to be tested is placed six inches from each side of a partial enclosure formed by two walls of one-inch pine boards set at right angles and finished in dull black; the floor on which the range rests is made of one-inch white pine flooring covered by one thickness of building paper on which is superimposed one-inch tongue-and-groove oak flooring painted with clear varnish. Thermometers with bulbs from $\frac{9}{16}$ to $\frac{11}{16}$ of an inch in length are placed in the walls of the enclosure at six-inch intervals, up and down, and project $\frac{1}{8}$ of an inch through these walls toward the range. Others are placed on the floor under the appliance. The range burners are then properly adjusted and the range is placed in operation with the gas pressure increased to 125 per cent above normal. The gas cock or the thermostat, when one is supplied, is adjusted to maintain a temperature within the oven of 550°F. Note is made of the time when the oven reaches this temperature, and the range is operated for one hour longer. At the end of this period, the thermometer readings are taken and the room temperature is observed. For the range to comply with the fire hazard requirement, no one of the thermometers may register a temperature more than 90°F. above room temperature.

Regular top burners are tested for thermal efficiency at normal capacity with the same primary air adjustment as that used for the combustion tests.

Gas cocks on every range approved by the Laboratory must comply with certain minimum requirements for air injection and capacity as well as with the construction requirements. The air-injecting qualities of gas cocks are measured by the ratio of primary air to the gas in the burner head; this ratio is easily determined by a thermal conductivity air-gas ratio apparatus developed by the U. S. Bureau of Standards.

In addition to the tests outlined above, gas ranges approved by the laboratory must comply with performance requirements for the operation of burners, top and oven burner lighters, pilots, safety pilots, and time-clock devices, and for provision against explosion, leakage, and rust or corrosion of oven linings and coated sheet-metal parts.

Minimum standards of strength and durability are assured by construction tests made on every part of the range from base to bolts. Each sheet-metal piece is gauged to make sure that it has the minimum thickness required for the purpose it serves. The bases and legs, whether of cast iron or sheet metal, must have a certain cross-sectional area and must be capable of supporting a load of three hundred pounds without per-

manent deflection when such a load is distributed over the depth and over eight inches of the length in the center of the range. The sheets making up the broiler and oven bottoms, top burner boxes, and trays must be corrosion proof. To facilitate the house-wife's cleaning task, oven and broiler linings as well as burners must be easily removable. For added convenience, grates must be interchangeable where more than one is used and must not be bolted in place.

The insulating qualities of the oven and broiler are fixed by specifying a minimum thickness of insulating material or a width of dead air spaces, and their location. The inner linings must be so placed that if the space behind them is used for a flue way, it provides ample area for the passage of the products of combustion.

To prevent leakage, gas cocks are required to meet certain minimum requirements with respect to circumferential seal, bearing surface, and take-up. Similarly, holes in manifolds into which gas cocks are screwed must have at least $3\frac{1}{2}$ full threads. Cocks must be so marked or placed that their "on" and "off" positions can be recognized at a glance, and those for the oven and top burners must be easily differentiated. Mixer heads and shutters are to be so designed that a positive and easy adjustment is possible.

This brief outline of the requirements which every gas range must meet in order to obtain the Laboratory Seal of Approval may help to indicate the thoroughness with which they are tested to insure their durable construction and safe and efficient operation.

The interest of the Laboratory in maintaining and insuring compliance with the minimum and national basic standards of all ranges bearing the Approval Seal is not relinquished upon completion of tests, but periodical inspections are made at least once each year at the plant of the manufacturer, at his distributor's place of business, or in the field. All ranges of approved types must be identical with the model tested if they bear the Seal of Approval.

Thus the Laboratory Seal, although not a guarantee of quality in the popular sense of the word, is a symbol of safe and efficient performance. It insures a degree of perfection in construction and performance that the manufacturer would never be in a position to offer by himself. Many of the tests require expensive and elaborate equipment such as no one concern could afford to install. Thus the Laboratory begins where the manufacturer leaves off. Its various tests insure the purchaser of an approved product and aid him to get his money's worth when he buys a gas range.

Homes of Eskimos on St. Lawrence Island[1]

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IF WE travel in imagination to the bit of Alaska known as St. Lawrence Island, which lies between the neighboring continents of Asia and North America, we may see a man trudging along the shore, his back bent under the burden of two large pieces of ice, supported by a stick across the shoulder and tied with pieces of raw hide. This, we discover, is merely the usual way of taking home soft water when the ice is so thick that cutting or drilling through for water is difficult. The ice is placed in a corner of the living room on crude latticework four or five feet high over a seal-oil lamp. As the ice slowly melts the water is caught in a container underneath and serves as the "ice water" for drinking purposes. If there are several families living in one house, each has a separate corner for ice water.

We may be disappointed not to find this man going into an igloo. But there are no ice houses on the island; in fact there are very few ice igloos used by the Eskimos of Northern Alaska. When the St. Lawrence Island Eskimo builds his house he uses wood for the frame and skins for the walls and roof. As a building lot, he seeks a level space, preferably on a high sand bar, from which vantage point he can watch the ice and sea. Then he proceeds to clear it of rocks and to smooth it off by means of such crude tools as rakes made of reindeer horns and shovels of whale or walrus shoulder blades.

One of the most difficult tasks is the collecting of the wood which has drifted to shore. Since there are no shrubs or trees growing on the island, every bit of wood washed ashore is treasured. Mr. Otto William Geist of the Bunnell-Geist Expedition, from whom these data were obtained, recalls the building of one house where a trip of twenty-five miles was made to find suitable logs, which were towed in by a whale boat.

Only the driest logs can be used for building. Large ones, eight or more inches in diameter, are split lengthwise and then cut into pieces from six to eight feet long. These are placed vertically side by side and driven into the ground about one foot deep to form the entire lower part of the house. They are tied together with walrus skin ropes and to them

[1] Other articles on Eskimo life on St. Lawrence Island appeared in the JOURNAL OF HOME ECONOMICS, Vol. 22 (1930), pages 263 to 269 and 645 to 652.

the roof poles are attached which form the framework of the dome-like roof.

The framework of the roof is covered with two, three, or four new walrus skins which have been skillfully split by a woman to make them larger, thinner, and translucent. The skins are fastened down with heavy walrus rope. To the ends of the latter, large boulders, logs, or bones of whale are attached to prevent the roof from being blown away by the furious storms which frequently sweep the island. Besides the new skins, the covering of the roof may include old skins, old feather or fur parkas (a kind of coat worn by both men and women), and a layer of native grass, the whole being as much as a foot thick.

The only opening to the house is one about 3 feet high by 2½ feet wide, set 18 or 20 inches from the ground to keep the snow, cold, and dogs out and the babies in. It is fitted with a door hewn from driftwood and hinged with walrus skin. A lattice door is usually provided for use when complete closing is not desired.

The main part of the interior is the agra or winter room which is lined with walrus or reindeer skins. Agras vary greatly in size, but are approximately five feet high, fifteen to twenty-five feet long, and ten to twelve feet wide. The fact that one must stoop to enter offers no great handicap because Eskimo etiquette demands that one sit while in the agra. Mr. Geist learned this only too well through a breach of etiquette he committed by standing while he spoke; this caused great excitement, being equivalent to inviting the head of the house to fight.

The bare ground of the floor is covered with a walrus skin two years old, over which is placed an 18-inch layer of native grass, and, as top covering, a walrus skin which the previous year had covered the roof. Three sides of the agra are made of walrus skins and are stationary, but the front wall is of reindeer skin and can be raised for entrance. In it are two small ventilators which are always kept open. It seems to be the task of the youngsters to keep this front skin in place, and one may see them constantly tucking it into place to keep the cold out.

Within the agra we may find from one to four families, with a space allotted to each. Furniture is conspicuous by its absence. There may be a few low stools of whale vertebræ or driftwood, but our idea of modern conveniences does not fit in with these homes. The sleeping quarters are simple, indeed. One long driftwood log is placed on the floor next to the entrance and is used as a head log. It is the custom to sleep with the head against the entrance, to undress facing the west, and to dress facing the east. Skins, usually deer skins, and in some cases blankets, furnish

the only bedding. The Eskimo does not know the feeling of fresh, clean sheets and pajamas, but neither do we know the luxury of warm furs in sub-zero weather. Although no privacy is known, each person enjoys his own permanent sleeping space, and etiquette forbids using that of another.

Seal-oil lamps are used for lighting, heating, and cooking. If only one family lives in the agra, three lamps are the usual number, but with several families there may be as many as six or eight.

The yearly "house cleaning" is a very thorough one. The skin roof is usually removed in June, and during the summer months the entire place is exposed to sun, air, and rain. Meanwhile, the families live in tents; these are now often made of canvas but were originally of reindeer skin.

Some idea of life in such a home is given in an illustrated letter sent to President Bunnell of the Alaska College by Florence Nupok, an Eskimo girl of the highest type on St. Lawrence Island. "It is hard to draw in the agra because we have only the light of 3 seal-oil lamps and I have to lie on the floor . . . . which is made of walrus hides and my eyes hurt . . . . in the agra everything is oily, making clothes dirty. Agra is the old way to live . . . . My uncle like white man . . . . he eat on a table all the time." There are a few houses on the island very much "like white man's." In one there is such furniture as a writing desk, a bed, and even a modern washing machine run by a gasoline motor. These houses and equipment are still very unusual and the old are not without their points as centers of family life. As we peek into an interior in the evening, we find the family dancing, wrestling, or playing such games as checkers, old maid, or dominoes; and we are impressed with the look of contentment on their faces.

High School Courses in Child Care and Pre-parental Education

How to prepare young people for possible future parenthood is one of the principal problems of present-day home economics. The following papers show something of current theory and practice which accompany its introduction into high school courses for girls. It is interesting to see how closely the work "ties up" with the girl's personal development and with information presented in other home economics courses.—EDITOR.

AIMS AND METHODS IN THE TEACHING OF CHILD DEVELOPMENT[1]

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TO EMPHASIZE the value to home economics teachers of sound knowledge of subject matter will make a fitting preface to this discussion. This knowledge must be strengthened by as much practical experience as possible, and augmented by constant observation.

There is great advantage in differentiating between the aims in junior and in senior high schools. Junior high school students are interested in the physical and mental development of their little sisters and brothers or their neighbor's children whom they often care for after school. Details of physical care fascinate them, and doubtless if well presented will stay with them for all time. They have ample opportunity for observation, and this suggests to us one of our best methods of making the work in child care and training concrete. It is valuable to use an observation guide which may be developed in class with the help of the students. Let this be the keynote for discussion and for their notebook work. Interest them in the guide in the beginning lessons so that all the work will be motivated and strengthened by their contributions. Such a guide should include a notation of name of child observed, his age, height, weight, and a kodak picture if obtainable. The points to be noted in the report should include the place where he sleeps; his cloth-

[1] Based on a paper read before the Organization of Supervisors and Teachers of Home Economics, Columbus, Ohio, June 30, 1930.

ing; his habits of feeding, sleeping, elimination, play, emotional responses; and his mental and physical development. If the teacher herself keeps an observation guide, the results from this method will be extremely valuable. It takes the subject matter out of the realm of theory and makes it real and practical to both teacher and student.

In the senior high school the discussion of the behavior of young children, of methods of developing good habits, and of the building of a personality standard for children leads the students to think in an analytical way of their own personalities: What kind of a person am I, social or unsocial? How do I react to specific situations? What habits of thinking and acting have I acquired so far?

This aim of developing personality in the senior high school student will bring far-reaching results. We would do well to make it a basic motive for the course, teaching the girls that in any situation it is "what you are" that counts. Give them a definite personality goal, such as "an individual who possesses self-confidence without over-aggressiveness, independence with open-mindedness, a cooperative spirit in both work and play; standards by which to work and act; an absence of fear when meeting new situations, and a realization that difficulties are learning situations and must be met as such if the individual is to possess a well-rounded personality."[2]

A second aim, necessary for carrying out the first, is the discussion of an organization of family life which will make possible the development of the various personalities involved. Such an organization depends on encouraging the cooperative effort of each and every member of the family from the youngest to the oldest, not only in the household activities but in the desire to give each member a chance to develop to his highest and fullest possibilities. This involves early training in recognizing the rights of the individual.

Senior high school work can be enriched and motivated by frequent demonstrations by the students of such processes as the preparation of foods for children, self-help clothing, toys, books, and music for children. Demonstration has a threefold value—it stimulates reference reading and observation; it develops poise, confidence, and initiative in the student; it helps to build a vocabulary in the subject. In no other types of classroom procedure does the student pay so much attention to the selection of words and phrases.

[2] See "Care and Training of Children," By HELEN C. GOODSPEED and EMMA JOHNSON. Chicago: J. B. Lippincott Company, 1929, p. 208.

Since the student's future use of this subject matter depends to a great extent on knowing where to get the best advice when a need arises, plan for trips to clinics, nursery schools, baby hospitals, community playgrounds; and invite nurses, physicians, nutrition experts, psychologists, and nursery school specialists to talk to the class. Give the work the utmost publicity by arranging for exhibits to which the public is invited; examples of subjects for these are shoes for children, the best kinds of toys for children, and clothing for children. The United States Bureau of Home Economics has prepared a traveling chest of fascinating self-help garments for children which may be borrowed upon application.

The best methods in the world may prove ineffective in the hands of a teacher who has the wrong attitude toward the subject matter of child development. The sentimental approach does more harm than good. With this method, senior high school students lose interest. In both junior and senior high schools, the approach should be informational, practical, and guided by a truly scientific interest in finding out the latest and best which specialists have to offer.

A TEACHABLE HIGH SCHOOL COURSE IN CHILD CARE[3]

EVERICE PARSONS

Chairman of Homemaking, Fordson High School, Dearborn, Michigan

THAT home economics teachers do everything possible to help develop the girl of today into the finest type of womanhood, to instill in her splendid attitudes and ideals toward parenthood, and to establish workable standards of judgment, is definitely more important than to teach detailed subject matter—subject matter which will undoubtedly change in the next few years as it has in the past. Nothing remains static, and students must be prepared to expect and look for changes and to adjust themselves and their practices accordingly.

There is nothing which has a greater appeal in bringing a group of girls to a common understanding than the discussion of themselves. All high school girls today are particularly interested in personality. Why certain people are more fascinating than others and what makes them so, are subjects of unfailing interest. They are anxious to study themselves and make any improvements they can. Right here is the opportunity for laying the groundwork for the development of the girl

[3] Based on a paper read before the Organization of Supervisors and Teachers of Home Economics, Columbus, Ohio, June 30, 1930.

herself. Individuality is the thing which makes life interesting, but society demands that it shall be confined within certain limits. What are these limits? We are the products of heredity and environment. What influence do our homes and families have upon us? The following outline of a course developed in the Fordson High School at Dearborn, Michigan, shows one attempt to adopt these and similar questions to the use of high school girls.

I. The girl herself
  A. Attractiveness and personality
    1. Environment
      a. Home
      b. Members of the family
    2. Heredity
  B. What a family is and does
    1. Responsibilities of the family to the girl
    2. Responsibilities of the girl to the family
    3. Responsibilities to herself
      a. Health: physical; mental; social—friends, choosing a mate
      b. Knowledge of life
      c. Human development; adolescence

II. Child development
  A. Pregnancy
    1. Care (diet, elimination, rest, etc.)
    2. Preparation of baby's clothing
  B. Confinement
  C. Infant care (physical, mental, social health; bathing, feeding, sleep, exercise, sunbaths)
  D. Child care (physical, mental, social, emotional, and esthetic development as influenced by such matters as food, clothing, sleep, elimination, simple diseases, play, playmates, learning to talk and to walk, discipline, fear, anger, holding grudges, love, appreciation of nature, music, art, and literature)

Round-table discussion proved a successful method of conducting this class. The usual demonstrations of bathing, feeding, and the rest, offered variety. The girls were assigned certain outside readings from books and magazines which formed the basis for discussions.

As soon as the unit on child development was reached, the class was divided into groups; each group made a study of children of a given age and reported on it. This permitted a more extensive study of each age, made all the subject matter available to all students, and offered an excellent opportunity for cooperation. The group reports were assembled in a class notebook, to which was added supplementary material gathered from newspapers and magazines by the girls.

Nearly all students had brothers and sisters whom they could observe and practice on at home, and they gained excellent ideas and standards from a visit to the Merrill-Palmer School where they saw how trained adults handle children.

A few weeks before the close of school, a one-day nursery school was held for children from nearby homes. The girls spent their regular class hour and any free hours out of doors with the children. Certain ones chosen by the group were excused from all classes to assume full responsibility for the morning. This activity emphasized the practicality of our work and gave the girls more ideas for handling the children.

There is no better nor more desirable place in the homemaking curriculum for teaching the principles of mental hygiene and human relations than in a child care course, for these subjects are given life and interest in this connection. The girls are impressed with the value of a sound philosophy of life and they see that the ability to get along well with people is one of the fine arts of living.

EDUCATING FOR PARENTHOOD

ADA KENNEDY

Director of Home Economics, Pasadena City Schools, Pasadena, California

SINCE the home is responsible for the training of the child during his early formative years, it is most important that the future fathers and mothers of the race be educated for parenthood. With this in mind, many secondary schools are offering child development courses with or without laboratory facilities. The John Muir Technical High School, Pasadena, California, is requiring a one-semester course in child development of all girls enrolled in the eleventh and twelfth years. In connection with this course there is a demonstration laboratory for work with preschool children. The theory presented in the classroom is supplemented and applied in the laboratory. The students are in the classroom three days a week and in the laboratory two. An observation room with a screen of one-way visibility adjoins the laboratory, so that an entire class can observe without disturbing the activity of the preschool children. Four girls assist in the laboratory during each period.

In the demonstration unit there are sixteen preschool children of from two to four years of age. The children come at eight-thirty and stay until three and follow a fairly typical nursery school schedule, flexible and varied somewhat according to weather and other conditions.

The units of work offered in the classroom are as follows:

1. The family's responsibility to the child
   a. Heredity
   b. Environment
2. The community's responsibility to the child
3. The physical growth of the child
   a. Nutrition
      (1) Study of
         (a) Food requirements of the preschool child
         (b) Feeding problems
      (2) Keeping food records of children in the laboratory
      (3) Weighing and measuring children
      (4) Acting as assistants at meal time (one girl for each table)
   b. Selection of clothing
   c. Health habits
4. Behavior problems of children
   a. Habit formation
      (1) Formation of good habits
      (2) Changing undesirable habits
   b. The emotional development of the child
5. Play as a factor in the development of children
   a. Physical value
   b. Mental value
   c. Social value
6. Development of the personality
   Personality study of a child in the laboratory, using as a guide "Questionnaire on Motor, Social, and Intellectual Development" by Dr. Ruth Andrus.
7. Study of pictures and stories for children.

What is learned in the classroom is directly applicable in the laboratory. The average high school girl cannot, without guidance, distinguish the significant from the insignificant in observing a group of preschool children. Skillful teaching by "leads" and by use of such devices as observation sheets helps the girl to interpret what she sees. Being able to appreciate the significance of the child's behavior means that much of the drudgery is eliminated from the care of children.

A course in child development is rich in appreciations—appreciation of the rights of the child as an individual, appreciation of the responsibility of the parent, appreciation of the family as a unit of society, appreciation of the need of wholesome food, and appreciation of the importance of forming good habits.

Open Forum

How a Public School Helped Children to Like Vegetables. On observing the methods and results secured in progressive schools financed by liberal private funds, public school teachers are often left with a discouraged feeling that progressive education is necessarily expensive education.

As nutritionist and supervisor of health teaching in public schools, I was struck with the similarity of the health problems among the public school children and those children with whom I had been in contact during my experience as educational interne in the household arts department of the Lincoln School of Teachers College. The little experiment here described was undertaken to see whether or not some of the practices could not be adopted in a public school without great cost, if it would be possible to apply the same or similar methods in dealing with some of these problems in the public schools—if even there we could teach the children really to like the foods which we felt were essential to their health and physical well-being.

In the private school the children were allowed to visit the exceptionally well-equipped food laboratory and help prepare certain dishes. As a result, they learned to handle sharp and hot instruments without physical injury to themselves; they developed a keen interest in foods; this interest carried over into their regular classroom studies; and they often seemed to develop a distinct liking for the taste of the dishes that they had helped to prepare and serve.

Could I apply such methods to my situation in the public school system where I was faced with severe financial handicaps as well as conservative scepticism on the part of school administrators and governing boards toward all so-called "frills" in education? Would the results obtained in the private school be possible without the expensive laboratory equipment? Could the enthusiasm of an interested teacher and the natural interest, curiosity, and creative impulses of the children carry us over our material handicaps? I decided that it was at least worth the try, and after interesting a first grade or beginners' group teacher (we had nothing so modern as a kindergarten) in the experiment, we proceeded to lay our plans.

Our first problem was to secure a minimum of equipment at the least possible cost. We finally decided on the following, which proved quite

adequate: A teacher's room served as kitchen, and for our work table we used a small round table covered with a second-hand oil-cloth cover. A small electric plate purchased for one dollar was our only source of cooking heat. The rest of the equipment consisted of a good-sized double boiler, a large spoon, a paring knife, a larger sharp knife, two dish pans, a dish-cloth, towel, and soap. The children each brought a cup and spoon, and we used paper towels for doilies. The food used was secured either by the courtesy of manufacturers in the form of samples or from the children themselves. We prepared a few milk soups, quite a variety of vegetables, some whole grain cereals, and a few simple desserts.

The children were mostly of foreign-born parents. The class numbered about thirty and was located in the corner of a large assembly room across the hall from the improvised kitchen. The time allowed for the actual food preparation with the children present was the usual half-hour scheduled each week for health education. The serving and eating were usually done in connection with the mid-morning lunch or in the afternoon just before the children went home.

The teacher and I worked together closely. She had charge of the preliminary period of hand-washing and the rest. I helped her in the preparation of the food. She took complete charge of the most important part of the project, the eating "party," and also of the tidying-up which was done later by a special committee of children. Serving on this committee seemed to be considered by the children as quite a privilege.

Our results were almost more than we had hoped for. Not only were the children wild with enthusiasm over the parties, but the parents also expressed great interest in what we were doing.

So great was this interest that we soon realized the need of a cookbook to send home which would tell them all about it. We wrote the recipes in as simple a form as possible and illustrated the pages with amusing little cuts, some from children's drawings. For a foreword we prepared a short letter to "Mother."

Dear Mother: Do you like our cookbook? We have eaten some of these foods at school and like them very much. To grow big and strong we need three or four glasses of milk every single day, one or two nice vegetables besides our potato, some fruit, and a good hot cereal for breakfast.

Will you please use our cookbook very often?

Our cookbook concluded with seven healthful dinner menus using the dishes described in our book. We had it mimeographed and bound in bright colors. The children took their copies home with great pride.

The project had been an effort on our part, but we felt well rewarded in that we had helped at least some of our children to learn to like vegetables.—EMILY CURRAN, *Supervisor of Health Teaching, Nassau County Committee on Tuberculosis and Public Health, Mineola, New York.*

Work of a Federal Food and Drug Inspection Station. Everyone interested in home economics knows in a general way that the federal food and drugs act is designed to insure the purity and honest labeling of our foods and drugs, but very few people not directly connected with the Food and Drug Administration know just how this law is enforced.

The administrative offices are, of course, in Washington. The United States is divided into three districts and in each of these are a number of Food and Drug Inspection Stations. These stations are really well-equipped laboratories. Each station chief has under his direction an average of four chemists and four inspectors, together with the necessary clerical and custodial personnel.

Since the work of the 17 stations is very similar, except that regulatory work varies somewhat because different foods and drugs are produced or manufactured in different sections of the country, the station's work can best be told by describing that of a single station.

The Cincinnati, Ohio, station in the Central District is held responsible for the foods and drugs sold in interstate commerce which are produced in Tennessee, Kentucky, Ohio, and the southern half of Indiana.

An inspector leaving Cincinnati for an extended inspection trip through his station territory stops in almost every city he passes through. In some places he makes factory inspections or investigates specific complaints received from consumers. In other towns he collects samples of goods which are produced in the other stations' territories. These last assignments come to him because the other stations have reason to suspect the product and have reported specific interstate shipments to him.

What does he do in a factory? Let us follow him through a plant engaged in the manufacture of mayonnaise and salad dressing. After introducing himself, he proceeds directly to that part of the plant where the products are being made. He notes the kind and quality of the vegetable oil used; he examines the eggs as well as each of the materials going into the condiments. He makes careful weighings or measurements to determine just what proportion of the different materials are used in the various products. After noting the sanitary condition of the factory and getting much general information from the manager, he obtains several copies of each label and obtains records showing where the prod-

ucts are shipped in interstate commerce and takes small samples of the different products. Finally, he determines whether or not the firm is declaring the quantity of contents correctly as required by the law.

These samples go to the station laboratory for analyses. Here the chemist literally takes the food to pieces. He determines the kind and percentage of oil and egg yolk it contains, looks for fillers and other possible adulterants. When he is through, he can tell the approximate formula of the food.

The inspector's report, together with the chemist's analysis, then goes to the station chief. He compares the formula the firm gave to the inspector with the findings of the chemist. More important still, he compares the statements on the labels with the chemist's findings. If the food is labeled "mayonnaise," the chief compares these findings with the federal standard for this food. According to it, mayonnaise must be a semi-solid emulsion of vegetable oil, egg yolk or whole egg, and vinegar and/or lemon juice seasoned with one or more of the following: salt, sugar, spice commonly used in its preparation; it must contain not less than 50 per cent of vegetable oil and the sum of the oil and egg yolk must be at least 78 per cent. This is an excellent condiment. You will note particularly the absence of artificial color and fillers, such as starch. If the product is labeled "salad dressing," the chief has no such yardstick for measuring it. Although mayonnaise is a term which can properly be applied only to a food of the composition described, salad dressing is very broad in its meaning and includes anything used as a dressing for salads. The chief knows that there are on the market many salad dressings which resemble mayonnaise. These may contain as little as 30 per cent oil and eggs with vinegar and spice, while the remainder of the product is simply starch and water.

The chief has gone as far as he can go when he refuses the name "mayonnaise" to such an article, although he knows that the one labeled "salad dressing" is really the more expensive and that only the better informed housewives will learn the difference between these two terms and profit accordingly.

The work of the station on mayonnaise illustrates its investigations of all foods and drugs. It also illustrates the advantages to be gained by reading labels intelligently. Inspectors are constantly inspecting, investigating, and sampling. The chemists are forever analyzing and devising new methods to detect improved means of adulterating foods since, regardless of the fact that almost all food manufacturers are honest, there are enough who are not, to keep the Administration busy.

After the station has learned whether a food or drug is legal or illegal, the facts are reported, with a recommendation for action, to the district chief. The latter reviews the case, correlates it with the work of the other station in his district, and sends it to Washington with his recommendation.

If the offense is a minor one, the firm is usually given an opportunity to correct it without the expense of a lawsuit. When, however, the violation is of a more serious nature, either one or both of two forms of legal action may result. The firm's adulterated or misbranded merchandise may be confiscated. Thus, a salad dressing of the composition mentioned, if labeled as a "mayonnaise," would be seized. The responsible individuals or the firm, if it is a corporation, may be prosecuted.

In either type of legal action, the manufacturer has an opportunity to defend his goods or himself, as the case may be. The trial, of course, makes lots of work for the station. Expert witnesses, such as home economics specialists, housewives, trade experts, wholesalers, and others, must be interviewed and employed. Finally, the chemist who analyzed the offending goods and the inspector who can produce records and witnesses establishing the interstate character of the sale, must testify. Trying a food and drug case before a jury is very interesting business, but space is too limited to tell of it in this article.

After the case is won, the station's work is not finished because it must see to it that the court's order is carried out and that the goods are either destroyed or properly re-labeled.

Anyone who is interested in the work of a food and drug inspection station is always welcome to visit one and see for himself how Uncle Sam supervises the food and drug supply of his citizens.—GEORGE P. LARRICK, *United States Food and Drug Administration, Washington, D. C.*

The Construction of Stage Costumes in Clothing Classes. Every supervisor, head of department, and teacher of home economics is more or less concerned to prevent the exploitation of clothing classes when the school calls for cooperation in costuming a play or pageant. There is need of detailed research into the problem of the educational value of such work, and experienced teachers might make valuable contribution to home economics by such study. Meanwhile, plays and pageants continue to be produced whether or not we know how best to meet the situation. The following form sheet was made and sent to clothing teachers two years ago when a system-wide pageant was to be presented in the Long Beach schools. It is offered not as a cure-all for

the exploitation itself, but as a possible way to standardize class procedures and to study the scope and value of such projects.

To Clothing Teachers: Date.....

I am requesting you to set aside the weeks of..... ..... for costume making for the pageantry projects of..... ....., as one contribution to the general cooperation of the entire school system.

The special work for these weeks in all clothing classes will be:

1. The making of ..... costumes (to be apportioned to schools on the basis of number of girls in clothing classes).
2. The construction of several costumes to be used as models which will be copied later through the cooperation of other organizations.

Directions—Please observe the following directions conscientiously:

1. Do not *waste* material! All cutting should be supervised by the teacher with no *exceptions*. (Expensive material has often been spoiled by the cutting of garments by pupils without the teacher's supervision.)
2. Divide the girls as to ability and carry on the work as a factory process, suiting the individual to the job.
3. The cutting should be done by the teacher and by a group of the most capable girls under the teacher's direct supervision.
4. The basting or the putting together of costumes should be shared by all girls. Emphasize speed and accuracy.
5. The machine stitching should be done by the best machine operators. Use as long a stitch as possible to expedite the process.
6. As each costume is finished, two 2 x 3″ white cambric labels should be prepared for it. Turn in raw edges all around, press flat and choose a girl who can print well to mark the labels in large letters with indelible pencil to show the size of the pattern used. Sew these firmly to the costume and its accessories. Labels may be made by girls who are not chosen for other work.
7. When finished, fold each costume; sew (do not pin) hat or other accessories to the costume; and wrap or box the costumes according to size. It will assist in the final collection and distribution of costumes if they are placed in labeled suit boxes.
8. Mark on outside of box (which should be tied) name of school, class, number of costumes contained in box, e.g.

   School.....
   Class.....
   Type of Costume.....
   No. of Costumes.....
   Sizes of Costumes.....

9. Place all material and scraps left from cutting in separate box (all of one kind clipped together) and laid flat so that the material will not be creased. Return with finished costumes.
10. In order to estimate the time needed to make a costume, keep an accurate record of total periods used, number of girls working, number of costumes completed,

and from these figures average the time necessary to make one costume. Include an estimate of the time spent by the teacher.

11. Record of time spent in making costumes:

School..... Teacher..... Date, from.....to.....

	CLASS OR GRADE			TOTAL
1. Type of Costume.....				
2. Number of pupils working.....				
3. Number of costumes completed by classes or grades...				
4. Total time in hours (60 min.) used.....				
5. Average time required to make one costume.....				
6. Total time of teacher used outside of class.....				

—MAUD E. HAYES, *Director, Department of Homemaking Education, Long Beach City Schools, Long Beach, California.*

Modes for Maids: A Household Arts Entertainment. Patrons of the South Bend Schools were entertained and informed concerning the work done in the clothing classes when the household arts department presented "Modes for Maids," a revue of modern and historic costume.

Various other departments contributed to the success of the production. Teachers in the music, art, dramatic, and physical education departments gave generously of their time.

The first part of the program featured present-day dress, but it was not at all the time-worn style show. Rather than making a monotonous display of dresses the main feature, the showing of the products of the girls' work was largely a means to an end—to show the audience what is actually done in the classroom to develop good taste in dress. Each school illustrated, in an original way, one factor which contributes to the success of a well-chosen dress. A connecting thread was maintained by two characters whose conversation prepared the audience for the various scenes, Miss Now and Mrs. Noah, the grandmother who lived in the past. The numbers were as follows:

On Dress Parade. Any girl in the department had the privilege of appearing in a garment she had made, and nearly one thousand girls had the thrill of coming on a stage before a great audience—for the house was packed. It was inspiring to see the long line march quickly across the stage to the splendid music of the High School orchestra, and the audience responded generously.

Dollars and Sense. In one part of this scene an immense dollar sign was the pivot around which a group of girls danced. Their attractive

cotton frocks, costing less than one dollar each, suggested the direct relation between dollars and sense in solving the clothing problem.

The result of a well-formed clothing plan was shown by another group who displayed two wardrobes for the junior high school girl—one well planned and the other chosen with little thought.

Tips for Types. That personality has its effect on the selection of clothes was demonstrated by pictures which became alive as models, dressed in accord with personality, stepped from the pages of an immense book labeled in bold letters "Tips for Types."

Me and My Shadow. Surprising were the results when Madame Goodline and her assistant made stout figures appear more slender and thin ones plumper by a mere shifting of line. This was cleverly done in black and white. The audience not only witnessed the transforming effect of different collars, cuffs, and belts, but also saw the difference in silhouette as the shadow of the "customer" was thrown on the screen, first on entering and then on leaving the imaginary shop.

The Time and the Place. The girls in this group showed that a sense of the fitness of various types of clothes for different times and occasions is essential to good appearance.

Striking Apparel. This playlet dramatically presented the fact that clothes serve us best when we take care of them, that they may "strike" if neglected.

A Color Fantasy. Capes and tams of rainbow hues were worn by a group of girls. They formed a large wheel which became a riot of color as they danced. When at last a rainbow was formed, a wee fairy emerged from the pot of gold; and at the touch of her magic wand, off came capes and tams, displaying most attractive cotton frocks.

The second part of the program was an historic costume revue "De Temps en Temps." All costumes were made by clothing classes and were modeled by high school girls. Materials were selected to give as nearly as possible the effect of the period and an effort was made to choose the most beautiful in design out of each period represented. The plot was simple. Madame entered the shop of the smart Parisian designers in quest of a gown for the "soirée dansante." They showed her their entire stock, but she was about to leave in disgust when one of the designers offered to submit a gown planned especially for her if she would return in an hour. Desperately they searched through their portfolios of historic costumes for an inspiration. As they considered the various periods, models appeared in appropriate costume. The periods and outstanding styles, or the garments representing them,

were as follows: Medieval (the hennin), 1400; Italian Renaissance, 1500; Spanish Infanta, 1650; Rococo style, 1720; Polonaise—France, 1780; French Empire, 1800; hoop skirt, 1840; crinoline, 1850; bustle, 1880; mutton leg, 1890; gored skirt, 1900; short skirt, 1925. Finally, having gone through the portfolio, they decided to make an original gown inspired by various periods. The model, moderne-1930, appeared just as Madame returned. She was pleased and bought the costume.

The costumes have become the permanent property of the household arts department and have been carefully put away for future use. In time, we hope to add to the collection which now includes only a few examples of the many distinct styles introduced by ever-changing fashion.

The success of the production was strengthened by the music which corresponded in period to the various costumes and to the dancing by some of the "models." Throughout we were fortunate to have the assistance of a former high school student who was very much interested in costume study. He not only wrote the lines and helped in selecting and designing of costumes, but also directed the production, his use of color and lighting being especially successful. Great care was taken in selecting models of the proper type and personality for the various costumes as well as for their ability to sing, dance, and, in every case, to wear the costume with poise and grace. It was, no doubt, the combined efforts and enthusiastic support of all concerned that placed this revue among outstanding productions in our high school.—EDNA ROOP, *Central Senior High School, South Bend, Indiana.*

Editorial

The Children's Charter. To all members of the White House Conference on Child Health and Protection the Christmas mails brought a delightful greeting from the White House—a beautifully printed copy of the "Children's Charter," the nineteen aims for which the Conference had pledged itself to work. Adopted hastily at the close of the Conference, the original phraseology was admittedly not always the best; the revision here used, is welcome for its greater clarity, balance, and dignity of expression. As the Charter now appears on the large, handsome sheet with its artistic lettering and bits of blue illumination, it will be prized as an inspiring reminder of the fundamental idealism of the Conference. It will also serve to intensify the memory of Mr. Hoover's own profound interest in children and their welfare and will recall his opening address at the Conference and its revealing glimpses into his personal understanding of and affection for children.

Though the newspapers have already given JOURNAL readers opportunity to read the charter, the text is printed here because of its permanent value and inspiration.

The White House Conference on Child Health and Protection, recognizing the rights of the child as the first rights of citizenship, pledges itself to these aims for the children of America:

For every child such spiritual and moral training as will help him to stand firm under the pressure of life

For every child understanding and the guarding of his personality as his most precious right

For every child a home and that love and security which a home provides; and for that child who must receive foster care, the nearest substitute for his own home

For every child full preparation for his birth, his mother receiving prenatal, natal, and postnatal care; and the establishment of such protective measures as will make child bearing safer

For every child health protection from birth through adolescence, including: periodical health examinations and, where needed, care of specialists and hospital treatment; regular dental examination and care of the teeth; protective and preventive measures against communicable diseases; the insuring of pure food, pure milk, and pure water

For every child from birth through adolescence, promotion of health, in-

cluding health instruction and a health program, wholesome physical and mental recreation with teachers and leaders adequately trained

For every child a dwelling place safe, sanitary, and wholesome with reasonable provisions for privacy, free from conditions which tend to thwart his development; and a home environment harmonious and enriching

For every child a school which is safe from hazards, sanitary, properly equipped, lighted, and ventilated. For younger children nursery schools and kindergartens to supplement home care

For every child a community which recognizes and plans for his needs, protects him against physical dangers, moral hazards and disease; provides him with safe and wholesome places for play and recreation; and makes provision for his cultural and social needs

For every child an education which, through the discovery and development of his individual abilities, prepares him for life; and through training and vocational guidance prepares him for a living which will yield him the maximum of satisfaction

For every child such teaching and training as will prepare him for successful parenthood, homemaking, and the rights of citizenship; and, for parents, supplementary training to fit them to deal wisely with the problems of parenthood. For every child education for safety and protection against accidents to which modern conditions subject him—those to which he is directly exposed and those which, through loss and maiming of his parents, affect him indirectly

For every child who is blind, deaf, crippled, or otherwise physically handicapped, and for the child who is mentally handicapped, such measures as will early discover and diagnose his handicap, provide care and treatment, and so train him that he may become an asset to society rather than a liability. Expenses of these services should be borne publicly where they cannot be privately met

For every child who is in conflict with society the right to be dealt with intelligently as society's charge, not society's outcast; with the home, the school, the church, the court and the institution when needed, shaped to return him whenever possible to the normal stream of life

For every child the right to grow up in a family with an adequate standard of living and the security of a stable income as the surest safeguard against social handicaps

For every child protection against labor that stunts growth, either physical or mental, that limits education, that deprives children of the right of comradeship, of play, and of joy

For every rural child as satisfactory schooling and health services as for the city child, and an extention to rural families of social, recreational, and cultural facilities

To supplement the home and the school in the training of youth and to return to them those interests of which modern life tends to cheat children every stimulation and encouragement should be given to the extension and development of the voluntary youth organizations.

To make everywhere available these minimum protections of the health and welfare of children, there should be a district, county, or community organization for health, education, and welfare, with full time officials, coordinating with a statewide program which will be responsive to a nation-wide service of general information, statistics, and scientific research. This should include:

(a) Trained, full-time public health officials, with public health nurses, sanitary inspection, and laboratory workers
(b) Available hospital beds
(c) Full-time public welfare service for the relief, aid, and guidance of children in special need due to poverty, misfortune, or behavior difficulties, and for the protection of children from abuse, neglect, exploitation, or moral hazard

For *every* child these rights, regardless of race, or color, or situation, wherever he may live under the protection of the American flag.

The Parent-Teacher Program in Parent Education. The rapid growth and popularity of the idea of parent education is one of the striking developments not only in the world of education but also in the world of parents. It would be difficult to estimate how many lay groups are studying the subject the country over, but the number must be impressive, considering the national agencies that are fostering the movement. Besides organizations like the National Council of Parent Education in which it is the major interest, there are others in which it has for some years formed one of the important items of the program; for example, the American Home Economics Association, the American Association of University Women, and, to an increasing extent, the cooperative extension service in agriculture and home economics. To these, the National Congress of Parents and Teachers now more than ever belongs by the inauguration of a carefully planned program under professional leadership.

The ideal of the Congress is "an intelligent parenthood working in cooperation with the school to bring about the best interests of the children of the community. . . . ." A year ago it requested the National Council of Parent Education to appoint members to a joint committee which should work out plans for a well-organized, professionally guided, adequately supported program of study for its members. The Council and the Congress each appointed three members besides their respective

presidents, one of those from the Council being Miss Anna Richardson, the representative of the American Home Economics Association. The feeling of this committee was:

> . . . that an adequate program of parent education for the National Congress must be placed on a professional basis; that they need and desire the leadership in this field of a professionally trained and experienced person; not to supplement the work of existing bureaus and committees but to work with them to build up a program of parent education of a standard which will commend itself to the professional groups.

Last April the committee secured from the Spelman Fund an appropriation of $20,000 to develop such a program and carry it on for two years. The plan provides for the following services: field consultation in regard to the organization and coordination of programs; conferences with state groups; subject matter service covering the preparation, collections, and stimulation of source materials.

Dr. Ada Hart Arlitt, professor of child care and training at the University of Cincinnati, was persuaded to secure a year's leave of absence to start the new program of the National Congress of Parents and Teachers. At present her headquarters are with the National Council of Parent Education, 60 East 42nd Street, New York City.

Dr. Arlitt writes thus of the program and the part which home economists can play in it:

> A part of the program is given over to consultation service in the different states. The state educational institutions and the leaders in the state Congresses of Parents and Teachers meet together for a conference on a state program in parent education for Parent Teacher Associations. The conference discusses the resources within the state and the many possible uses of these resources and evolves a long time program. Departments of home economics are particularly valuable in connection with these programs inasmuch as they can at the present time furnish much valuable parent education material and they either are or may become centers for leadership training. Many home economics experts are splendidly qualified to lead parent education groups in discussions of home management, nutrition, clothing for children, and where there are departments of child development, children's behavior and parent child relationships.

It is hoped that some of the college departments of home economics may be able to organize training for leadership, either as special summer work or as a part of their regular four-year course. Work with parents offers an opportunity and a challenge to the home economics teacher who is genuinely interested in promoting education for home and family life.

Home Economics and Parent-Teacher Associations. The new program in parent education is only one of many points at which the work

of the parent-teacher associations touches that of home economists. The National Congress of Parents and Teachers includes a committee on home economics. Dean Margaret Justin became chairman of this last summer and is at work on a program which will undoubtedly call for the cooperation of home economists. In fact, there are many points of contact; and closer relations between home economics associations and parent-teacher groups, both local and national, would be helpful to both parties, especially perhaps to home economists. In view of this, the American Home Economics Association has appointed a committee to consider the development of such relations. Miss Swain is chairman, not merely because she is president of the Association, but because in her work as supervisor of home economics in Chicago she has had exceptional first-hand acquaintance with parent-teacher organizations. Other members are Dean Justin, Miss Richardson, and Miss Emeline Whitcomb of the U. S. Office of Education, whose nation-wide contacts with home economists in the public schools should make her counsel especially valuable. Miss Whitcomb is also the chairman of another committee appointed by Miss Swain to promote cooperation between home economics teachers and local parent-teacher groups.

Character Education in the Home Economics Program. The modern trend in educational circles spoken of as character education carries special significance to teachers of home economics. It is significant in terms both of responsibility and of opportunity. Making the most of the opportunity implies first an acceptance of the responsibility. What is character education and how can it be taught? In the November issue of the *Journal of the National Education Association*, Mrs. Jessie Charters speaks of character education as "the remaking of personality to produce a better social order." Another thought-provoking statement is thrown out by Maurice A. Bigelow in the December *Journal of Social Hygiene*. Speaking of the physical basis of character education, he says, "Character education is concerned primarily with the composite of a person's inherited and acquired traits which tend to determine his conduct towards other people. Hence its aim is to direct the adjustments of native traits or tendencies and the acquisition of new ones to the end that at maturity the individual's habits of conduct will be related as harmoniously as possible to other human beings." Obviously, then, the problem is that of training for a normal, intelligent individual with poise, ability, and stability—briefly stated as an integrated personality.

Integration, John Dewey tells us, "consists primarily in establishing a harmony between the ideas and ideals of the individual and the realities of the age in which he lives." And he further notes that self-interest alone is conducive neither to individual nor social peace and progress—the goals of all education.

New and interesting contributions to the question of "How?" are constantly appearing. The findings and recommendations from research and experimentation offer the keenly interested home economist many pertinent suggestions. The psychologist says the basis of an integrated personality lies in the laws governing habit formation and motivation of conduct. The biologist warns us that there are powerful physical factors which must not be disregarded. "Wherever," says Dr. Bigelow, "the delicate balance between internal function and the environment is not maintained, as in glandular disturbance, excessive nervous irritability or malnutrition, youth has a tendency to fail to react to character education." He cites, also, the profound influence on character exerted by the conflict between the physical basis of sex and the desirability of social control.

In addition, we have the assurance of the philosophers that the first step out of confusion is the ability to choose wisely, to discriminate fairly. To get new meanings from life, to study these meanings critically and determine their value, to keep tolerant towards those who disagree, and to let the good for the greatest number be the guide for action is the composite of strong personality.

In all this, the unique opportunity afforded home economics teachers is obvious. Our primary interest is the home and our primary purpose, educating for intelligent homemaking. The early years of life are conceded to be the ones during which the fundamental traits of character are well established. This responsibility rests largely with the homemakers. The environment in which the child grows and the standard of health he can maintain are largely determined for him by those who care for him in the home. His habits of thought, speech, and action are most likely to reflect those practiced in his home. In short, to help the homemaker formulate clear appreciations of the educational policies and procedures recommended for desirable character education and to give her courage to translate these appreciations into action is half the battle.

Another Conference on Parents. The home economics dinner held during the annual meeting of the Association of Land-Grant Colleges is usually a jovial respite from three days of strenuous work. Considering

that the week of last November's meeting included also the conference of the National Council of Parent Education and the White House Conference, the home economists who went to dinner at the Dodge Hotel on November 19 certainly looked forward to frivolity. Some of them appeared rather nonplussed when Jessie Harris, chairman of the committee in charge, turned the after-dinner proceedings over to Edna White, the president of the National Council of Parent Education, with the announcement that, as a special favor to the group, Miss White had been authorized by yet another conference to give a confidential preliminary report of its deliberations.

Miss White, in the serious manner suited to such an occasion, described this conference on the Improvement and Guidance of Parents as one composed of delegates selected from their own members by the children in nursery school centers and sent uninstructed. The conference was held at the Merrill-Palmer School, and no adults were admitted. Realizing that it is a stupendous undertaking to change adults, the delegates laid down a long-time program to be carried out by numerous committees, with such subcommittees, sub-subcommittees, and sub-sub-subcommittees as each might choose to appoint. By no means all the committees were ready to report, but brief preliminary statements were available from a few; these were extremely technical and represented ten printed volumes. Competent specialists had made summaries of them for use at the present meeting, which would be read by adults who enjoyed the confidence of the children.

"Federal Relations to Parent Improvement and Guidance" came first, presented by Genevieve Fisher of Iowa State College. It recommended the establishment of a Parents' Bureau in the War Department, with a personnel consisting entirely of nursery school children, who are considered best fitted for the work because of their impersonal view of their own parents and their opportunities to compare the latter with other parents and trained adults.

The committee on nursery schools, reporting through Wylle McNeal of the University of Minnesota, recommended

> . . . the daily inspection of parents by a nurse and the exclusion of those adults from their homes who are suffering from infections. This practice of eliminating from circulation those adults who are foci of infection would give children in the home the protection which they now enjoy only in nursery schools.

Sybil Smith of the United States Department of Agriculture was chosen to present the report on "Diet for Parents":

One of the most serious problems which confronts us at the present time is "The Emotional Stability of Parents as Reflected in Their Discipline of Children." In an effort to determine the cause of that instability which reflects itself in uneven disciplinary treatment, a comprehensive questionnaire was sent out to 10,000 representative children between the ages of 3 and 5 years in homes where the discipline is in the hands of parents and not relegated to nursemaids. Somewhat over 9,000 replies were received, of which 5,276 were considered sufficiently accurate for statistical analysis. Analysis of these revealed a high positive correlation between the adequacy of diet of the parents and their ability to exercise self-control in the management of the children. . . . Realizing that there are innumerable factors affecting the efficacy of any given diet such as hours of sleep and rest, sunshine, fresh air, freedom from worry concerning fluctuations in the stock market, etc., no less than 29 sub-subcommittees have been appointed under this subcommittee on the diet of parents, which in turn is under the larger committee of Emotional Stability of Parents. None of these related sub-subcommittees is ready to report finally at this time, but the subcommittee on diet is prepared to give a preliminary report of its findings in one phase of its work, namely a quantitative study of vitamins in the diet and their effects upon emotional stability. This has been a joint cooperative project between the Merrill-Palmer and Iowa State College Nursery Schools. Thanks are due the authorities of both these schools . . . and to the children who have supervised their parents during the experiment. The committee feels that there is sufficient experimental evidence to indicate that the primary deficiency in the diet of emotionally unstable parents is vitamin B_1, lack of which, as we all know, produces a condition of nervous irritability. The second limiting factor in the diet, vitamin A, your committee feels has been the cause of the increased irritability of parents during the late fall and early winter when the common colds are so prevalent. Your committee, therefore, recommends that the diet of all parents of nursery children contain liberal amounts of vitamins B_1 and A. As the simplest means of securing an optimum consumption of these vitamins, your committee further recommends that each parent be forced to consume at each meal two 2-ounce rolls containing 99 per cent wheat embryo or rice polishings before partaking of any other food and that a tablespoonful of cod-liver oil be added to each cup of coffee or whatever beverage is ordinarily consumed.

Lack of space unfortunately forbids quoting from the valuable findings of the committees on toys for adults, on tests for parents, on housing, on improvement of mothers. Typewritten copies of the entire proceedings will be preserved in the files of the home economics section of the Association. In response to urgent requests, we include here the scholarly recommendations on "Clothes for Parents," transmitted by Ruth O'Brien of the Bureau of Home Economics:

1. That research be initiated on the subject of clothing for laps, involving the following considerations:

   a. The development of fathers' laps

   b. The possibility of producing better upholstered laps. This should be undertaken in cooperation with the nutrition section of the Bureau of Home

Economics or the section of the Cotton-Textile Institute interested in increasing cotton utilization.

c. The development of new fabrics that will render laps non-skidding.

d. The value of constrictive clothing in decreasing the abdominal and other physiological promontories so destructive to the value of laps and fronts as places of rest for tired children.

e. The development of waterproof materials for laps in the interest of better family relationships.

2. That a series of investigations be undertaken on the effect of golf trousers, shorts, and abbreviated skirts on the development of locomotive ability in the young. It is expected that research will show the need for straps or other hand-holding devices on skirts and trousers for the use of toddlers.

3. A study looking toward the revival of mothers' apron strings.

4. An investigation on the effect of back-fastening garments of mothers on the nutritional development and emotional life of young children.

At the close of the meeting it was unanimously voted that Louise Stanley and Martha Van Rensselaer be appointed a committee to report these findings to the White House Conference.

Fellowships of the American Home Economics Association. The January JOURNAL carried a brief announcement of the fact that the committee on fellowship awards would receive applications from candidates for the academic year 1931–32, up to February 15, 1931, and would make the award by April 1, 1931. Two fellowships will be available.

The Ellen H. Richards Memorial Fellowship is a grant of $750 given for postgraduate study in any of the phases of home economics.

The Textile Section Fellowship of $300 will be granted for research leading to the standardization of textiles. The Ohio Home Economics Association has generously provided the money for this fellowship this year.

Information and application blanks for both fellowships may be obtained from the chairman of the committee on awards, Dr. Helen B. Thompson, University of California at Los Angeles, Los Angeles, California.

Pending Legislation. The first item on the legislative program of the American Home Economics Association pertains, very fittingly, to adequate appropriations for the United States Bureau of Home Economics. The present session of Congress is dealing with those for the fiscal year beginning July 1, 1932. The total appropriation for the Bureau for the year beginning July 1, 1931, is $207,000, an increase of $35,000 over the

previous year. The appropriations bill for 1932–33, as reported by the House Committee on Appropriations, calls for an increase of $39,680; and it is reasonable to hope that this amount will be approved by Congress. The additional amount, if granted, will be divided almost equally between studies on foods, textiles, standards and cost of living, and household equipment. Although a yet larger appropriation is needed, it is a satisfaction to report even this proposed increase under present economic conditions.

It is anticipated that the appropriations for the Women's Bureau and the Children's Bureau will be somewhat increased, although definite figures are not available as this statement is prepared. Friends of the two bureaus were pleased by the frequent and favorable references to the work of the bureaus at the time of the White House Conference on Child Health and Protection.

The status of maternity and infancy legislation is still uncertain, although it is possible that a measure for its support may be passed before the close of the present session of Congress. The Jones Bill, S. 255, which provides for the reëstablishment of this work in the states under the administration of the Children's Bureau, came up for consideration in the Senate in December and was passed on January 10, 1931.

A brief mimeographed statement giving the history of maternity and infancy measures in the United States, together with the status of legislation up to July, 1930, has been prepared for the use of the organizations in the Women's Joint Congressional Committee which are interested in such measures. Copies may be obtained for four cents each from Miss Gwen Geach, 532 Seventeenth Street, N. W., Washington, D. C.

The support given by members of Congress to these, as to most other measures, depends very largely upon the amount of interest which their constituents demonstrate in them. Letters, personal conferences, articles in newspapers and magazines, discussions at meetings which have resulted in definite recommendations—any and all of these have their influence when properly presented to representatives in Congress.—A. L. E.

Women's Joint Congressional Committee. On December 8 the Women's Joint Congressional Committee celebrated the tenth anniversary of its founding with a dinner in the garden house at the Dodge Hotel, Washington. The fifty women in attendance included representatives of the eighteen member organizations, the chiefs of the federal bureaus which deal with matters of especial concern to women, and Mrs. Carrie Chapman Catt as chief guest of honor. Miss Harlean James, the out-

going chairman, in her remarks as toastmistress recalled how the idea of the committee had been developed by Mrs. Maude Wood Park at the time when the recent granting of the suffrage to women found them uncertain how best to organize for legislative work. To Mrs. Park belongs the credit for the idea of a joint legislative committee made up of representatives of organizations with national legislative programs—a committee which does no legislative work itself, but furnishes the machinery by which such members as happen to be working in a common cause, can easily and quickly combine for mutual strength and to avoid duplication of effort, and can act for that cause without in any way implicating such other members as may not be concerned in it. Such machinery had apparently never been set up before. The ten years have convinced those who have watched the plan at work that it combines vision of civic ideals and practical knowledge of legislative procedure in a way that spells genuine statesmanship. It was a sincere disappointment that Mrs. Park could not be present in person to realize the gratitude and admiration felt for her conception and for the guidance which she gave to the committee as its first chairman.

Mrs. Catt, while never a member of the Women's Joint Congressional Committee, was closely associated with the conditions that led to its establishment; and her long experience in persuading reluctant legislators gave her ample material for a delightful talk on the amusing uncertainties of legislative effort. Miss Elizabeth Eastman, the newly elected chairman, also showed her experience "on the hill" by a crop of anecdotes that did more than merely amuse her hearers.

Home economists will be interested to know that Alice L. Edwards is now secretary of the Women's Joint Congressional Committee.

Standards and Labels for Gas Appliances. Every genuine effort to make it easier for the purchaser of household goods to select intelligently is of interest to home economists. In fact, an important aim of the present program of the American Home Economics Association is to make consumers more conscious of the advantages of standards, specifications, labels, and other devices which indicate the quality of the goods, and to encourage their use by manufacturers and dealers. A notable illustration of such a label is the seal of approval granted by the American Gas Association for use on appliances which have passed the rigid tests conducted in its testing laboratory. The article by Mr. Conner on pages 124 to 128, describing how household ranges are thus tested, will be interesting even to those who may not follow all its technicalities, because of this wider significance.

The subject is timely for yet another reason, namely, that the American Home Economics Association last summer accepted the invitation of the American Gas Association to membership on its approval requirements committee. This invitation reflected the desire of the American Gas Association to include users of gas appliances as well as producers and dealers, and similar ones were addressed to and accepted by the Underwriters Laboratories and the American Institute of Architects.

The American Gas Association, in July, presented a formal application to the American Standards Association asking that the American Gas Association Approval Requirements Committee be accepted as a sectional committee of the American Standards Association on Gas Burning Appliances with the American Gas Association as the sole sponsor. This was granted by the Council of the American Standards Association on September 11, 1930.

The project which the American Gas Association wishes to undertake is entitled "Approval and Installation Requirements for Domestic Gas Burning Appliances," and its scope is thus defined:

> Establishment of minimum or basic requirements for performance, safe operation, and substantial and durable construction for domestic gas burning appliances; together with laboratory methods of test for determining compliance therewith.

With the project thus carried on as part of the work of the American Standards Association, it will receive wider recognition and the requirements set up are more likely to gain general acceptance. Since they will serve to protect the household purchaser as well as the reliable manufacturer and dealer, the American Home Economics Association welcomes the opportunity to cooperate in their establishment.

Food Information in the Employment Program. That children are likely to be the first to suffer in hard times was pointed out to newspaper readers by Miss Grace Abbott, chief of the Children's Bureau, early in the autumn; and the warning has been constantly borne in mind by the leaders of relief movements, national and local. Many cities have arranged for special meals for school children in places where unemployment is reducing family expenditures to the danger point. The work organized for the President's Emergency Committee by Mrs. Gilbreth (see January editorials) includes, as a major project, a weekly newspaper service of food information, in which special emphasis is placed on the needs of children. The service is provided for the President's Committee by the United States Bureau of Home Economics.

In announcing plans for this service Dr. Louise Stanley, chief of the Bureau, reminded the public that the needs of children

> . . . are greater in proportion to their size than adults because the growth of children is largely determined by their food habits. With this idea in mind the Bureau has built up a food guide or market order to guide in the purchase of food supplies, that will maintain health and growth with a minimum variety, quantity, and cost of food.
>
> Various family groups will be chosen each week to illustrate the quantities of food needed to supply them with the sort of food that will offset diseases caused by lack of nutrition. In all instances the cheapest food in each particular class will be the one the housewife will be urged to buy. Prices vary from week to week in various localities so no hard and fast rule will be laid down in this respect.
>
> Each week the food guide necessary for children and adults will be repeated. It will contain the necessities for each meal, each day, and several times a week. A general statement of food markets will follow, with a discussion of the nutritive values of one of the essential foods outlined in the guide. There will also be included a simple menu for one day and a recipe.

In asking the cooperation of the press, Mrs. Gilbreth also emphasized the importance of supplementing and adapting the material in accordance with local conditions.

> . . . It is strongly urged that this be done, especially in the case of "cost of food day by day" and "the thrifty way to eat today" (or this week, as the service may be adapted to daily or weekly use). Local housewives may add menus and recipes and help in supplying market-basket budgets and price lists.
>
> In any districts where home truck gardens are practical, the effect on the food budget of raising some of the food supply, and especially the greens which are such an essential part of an adequate diet, should be emphasized.
>
> Every editor will judge for himself the most effective set-up for his readers. If you need help on gathering and preparing material of special interest to your locality, we suggest that you will find experts in your region. The home economics experts all over the country have been appealed to, to give this. Every State college has a department of home economics, and many counties have extension workers in this field. Clubs of women often have home sections and can be called upon to cooperate. We are requesting that they urge and use this newspaper food service.

Home economists have responded heartily to such appeals and also to the demands made upon them by the special feeding programs in the schools. And they have found personal and professional satisfaction in being able to render special service in the emergency, so that (to quote Mrs. Gilbreth) "the food standards of the country shall not be lowered."

Twelve Years of Vocational Education in Home Economics. The passage of the Smith-Hughes Act and the establishment of the Federal

Board for Vocational Education in 1917, meant that new principles were to be applied in certain parts of the public school system. We are indebted to Miss Adelaide S. Baylor, chief of the home economics education service of the Board, for the summary of twelve years' work which is found in the bulletin "Vocational Education in Home Economics," recently published as number 12 in the home economics series issued by the Board.

The report describes and interprets the provisions of the national vocational education acts as they apply to home economics, sketches the organization of the home economics education under them, and outlines the expansion and development of the program. Special topics considered are state supervision; all day, part-time, evening, and continuation schools and classes, including work with both girls and adults; geographical location of the schools and classes; teacher training; and expenditure of funds. Special sections describe the work for negroes, some of the outstanding achievements in individual states and territories, and the proposed programs for work under the George-Reed Act in various regions. Equally valuable are the list of studies in home economics education published by the Board, and the statistical information of interest in connection with the work.

The reader of the bulletin will agree with Director Wright's foreword, that this résumé "will be helpful to those already in this field of work, will be enlightening to those who know little about the program, and will be an orientation aid to those about to enter the field of vocational education in home economics."

White House Conference, Medical Service Section. The final session of Section I of the White House Conference on Child Health and Protection will be held in Washington on February 19, 20, and 21 under the chairmanship of Dr. Samuel McC. Hamill. The meetings will include discussions of interest to home economists, especially perhaps those of the committees on growth and development and on medical care for children. At the last session of the latter committee, Lucy H. Gillett will present a paper "The Relation of the Nutritionist to the Health Program."

Research

THE SCIENTIFIC STUDY OF THE PALATABILITY OF FOOD

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THOUGH food preparation is a very ancient art, as a science it has questionable standing. Among the reasons for its retarded development are the multitude of factors to be controlled in experimental studies, as Denton (1) has pointed out. The complexity of the processes themselves makes it necessary for understanding of them to wait upon advances in the younger branches of the physical sciences, such as colloid, physical, and bio-chemistry. By no means least in its retarding effect is the fact that until recently palatability has been almost the sole standard for evaluation of products.

The other modern criteria for evaluation of foods (nutritive quality, digestibility, sanitary quality, and economy) are based on objective phenomena which are readily investigated by experiment and measured by routine scientific procedures. Palatability, on the contrary, is a subjective quality, the term referring in a broad sense to the property of being agreeable to the taste, even agreeable in all sensory appeals.

Long ago it was said "De gustibus non disputandum." Recent studies of the origins of food preferences demonstrate that the connection between them and the sensation-producing qualities of foods is one of association rather than of inherent relationship. Unconditioned infants of weaning age eat omnivorously when allowed to select from a variety of natural, simply prepared foods (2). The likes and dislikes of children have been traced to training, customs, and habit (3). Menus for the family are selected to accommodate tastes of the adults, and after weaning, children's tastes are thus conditioned (4). By a right mental attitude, desire to like a food, and repeated trials, it has been found possible for children of all ages and even adults to develop a real liking for a food that was at first rejected (5).

All such evidence demonstrates the subjective nature of palatability and indicates the root of the difficulties that attend its evaluation. Finney (6) has pointed out that values cannot be measured objectively, and consequently, in themselves, are not subject matter for science. However, as he adds, though there can be no science of the *experience*

of value, there can be one of the *expression* of value. "John Smith's experience of liking (or disliking) olives is one thing, his saying so, or acting *as if* he did (or didn't) is another . . . . of this 'as if' behavior there can be a science." It is such an "as if" science that any science of the palatability of food must be. Red apples are not more palatable than yellow apples for any inherent reason. We conclude that they are more palatable because most people will choose them in preference to the yellow varieties and even pay a premium for them.

It is trite to repeat that "the proof of the pudding is in the eating," but there is so much truth in the statement for the average person that palatability continues and will continue to be the predominating factor in determining food choices. In spite of the obvious dangers resulting from "eating what one likes," palatability is a prime consideration, not only in industrial research but also in the attempts of home economists to add to the fund of our knowledge of food preparation. Consequently, critical discussion of the methods, technics, and devices available for the development of this "as if" science is not only desirable but essential.

The scientific study of the palatability of food consists of measuring the intensity of the sensation-producing qualities of foods and of rating these intensities according to preferences. Although there is no certain intrinsic cause-and-effect connection between a sensation-producing quality of food and palatability, that relationship is established through association. Though it is only as a result of custom that we wish our vegetables to be cooked until they are easily penetrated with a fork, their palatability comes to be, in part, measured by this penetration test. Therefore, in an investigation concerning palatability factors we may deal directly with these sensation-producing qualities. We may develop technics and apparatus for their measurement as has been accomplished for color, jelly strength, viscosity, and other physical characteristics. Then the second step in the problem is to determine which intensity of each property is preferred. Here our standard may be either the majority preferences of groups or the judgment of experts, or both.

Scales in the Measurement of the Sensation-producing Qualities of Foods. The sensation-producing qualities of foods include the odors, flavors, textures, appearance, and temperatures which we become aware of as sensory experiences. The methods by which they have been measured may be classified as of two types, comparison with scales and objective technics and apparatus giving numerical results.

A scale is an arrangement of perceptibly different quantities of a property in a graduated series. These may be identified by serial numbering

and used as the standard of comparison for the experimental products. Scales may be imaginary, descriptive terms being relied upon to convey their meaning to the judge, or they may be material, specimens of the product being employed or other substances chosen for direct comparison.

An example of the use of the descriptive or imaginary scale in the rating of foods is a much-used grading chart for cooked meat. Thus, tenderness is one of the qualities judged and the scale is described as follows:

7	6	5	4	3	2	1
very tender	tender	moderately tender	slightly tough	tough	very tough	extremely tough

The human equation in the application of such a scale is obviously rather large. It is very difficult to be certain that the concepts indicated by such brief descriptive terms are identical in the minds of all judges. Breadth of experience to include the whole range of intensities is essential, as is also similarity of verbal interpretation. For example, under the conditions of storage prevailing in northern states, potatoes may accumulate several times the quantity of sugar commonly present under other storage conditions; unless the person judging flavors of potatoes is familiar with this fact and the variations in taste that result, he certainly is not qualified to rate differences in this palatability factor.

The number of gradations that one is expected to distinguish is important in accuracy of application. Naturally, uniformity of opinion is likely to increase with decrease in number of such grades but, on the other hand, if a scale is too coarse, it will not have much scientific value.

The reliability of imaginary scales should be tested by comparison of the ratings of a number of judges on the same products. Even this precaution does not result in standardization that will produce comparability between different groups of judges working on different lots of products. The qualities of beef consumed in one locality might easily cause the judges in that place to associate "slightly tough" with a degree of tenderness which another group might consider "moderately tender." On the whole, those working with this method hope to see it superseded by more objective procedures, wherever possible.

Material scales have been used for comparative gradings of a number of qualities. The attention of those interested in foods should be called to the application of this method to the study of odors by Crocker and Henderson (7). These chemists believe that all odors can be reduced to varying degrees of four elementary odor sensations which they name fragrant, acid, burnt, and caprylic. Eight degrees and zero for each have been

found recognizable. Actual chemical compounds have been selected illustrating each degree and employed directly for comparisons.

The method permits numerical specification of the smell sensation from any substance. Coffee odor is described by the number 7683 which means that it rates 7 for fragrant, 6 for acid, 8 for burnt, and 3 for caprylic. It is pointed out that there is thus a possibility of classifying 9 x 9 x 9 x 9 or over 6500 odors; and in a critical discussion of this system, Boring (8) thinks that probably 2000 and perhaps 4000 odors may be so distinguished. This at least suggests a means of attack on one of the most elusive of the palatability factors.

Webb and Holm (9) matched the color of samples of evaporated milk with $CaCO_3$ suspensions to which were added varying amounts of 10 per cent $FeCl_3.6H_2O$ and 5 per cent $K_2Cr_2O_7$ solutions. In experiments on the factors affecting the color of potato chips, Sweetman (10) selected eight chips which covered the range of colors produced for a scale; this could be used for rapid ratings of large numbers of chips.

Material scales make quality ratings objective for the particular experimenter, but unless the same or an identical scale is available for others working in the field, duplication of results is difficult. This handicap would not enter into the use of such scales as those of Crocker and Henderson (7) or Webb and Holm (9) which are composed of standard substances available alike to all.

When the gradations of a visible quality are being measured they may frequently be reproduced satisfactorily by photography or in color if necessary. Thus Mohs (11) published a series of ten photographs of slices of bread which showed a range of cell sizes for comparing textures. Child and Purdy (12) have developed a method for preparing a graphic record of texture, volume, and contour of cakes. Colored charts covering a range of colors in canned sweet potatoes have been published by Magoon and Culpepper (13).

Where the foods themselves are used to form the scale and the qualities are not visible ones reproducible by photography or drawing, it is preferable that the scale be used primarily for speeding up comparisons and that some objective method of measurement of the qualities studied be adopted or developed to describe the scale. For example, in studying the effect of varying the amount of soda on the color of molasses cookies, one might select a series of cookies covering the range of colors obtained and use them for comparison with the experimental products. However, in any published account it would be preferable to include some such measurement of the color of the cookies in the scale as that obtained by

comparison with Munsell discs (15). This would enable other workers to reconstruct the scale or give a mathematical basis for comparison of results.

Objective Technics and Apparatus Giving Numerical Results Used in the Measurement of the Sensation-Producing Qualities of Foods. The scientist cannot be satisfied with his measurements until these are secured in a manner that permits universal repetition with results that can be compared. Thus an attempt is being made to supplement if not supersede the imaginary scale for rating tenderness in meat by construction of an apparatus by which it is possible to use definite weights on a cutting blade for the tests (14). There are some important palatability qualities, especially those concerned with flavors, that it may never be possible to get at objectively, but the applicability of objective methods had been proved in so many fields that they are certain to become more and more important in scientific food studies. Attention will be paid briefly to papers selected to illustrate the range and types of such technics.

Nickerson (15) has developed a method of measuring color in terms of its three aspects, hue, chroma, and value by comparison with standard color discs which can be combined in any proportions and blended by rotation. This technic has been employed in the measurement of the color of bread crusts by Grewe et al. (16), of evaporated milks by Webb and Holm (9), and of potato chips by Sweetman (10).

Size is frequently an important palatability factor and can be accurately recorded from volume tests (water or flax seed displacement), or by weight.

Many different types of instruments have been devised to measure texture in its various manifestations. Examples are:

Texture	*Apparatus*
Rigidity of gels	Bloom gelometer (17)
	Individually constructed apparatus (18)
Fluidity or viscosity of starch pastes, canned corn, etc.	Ostwald pipette (19)
	Stormer viscosimeter (20)
	MacMichael viscosimeter (21)
Hardness of cooked vegetables, etc.	Emil-Greiner penetrometer (22)
Plasticity of canned sweet potatoes, flour suspensions, etc.	Individually constructed apparatus (13, 23)
Stiffness of foams, whipped cream	Individually constructed apparatus (24)
Tenderness of pastry	Shortometer (25)
Body of cheese, crushing strength	Individually constructed apparatus (26)

While physical measurements of intensities of qualities facilitate objectivity, the search for explanation leads to chemical analysis in the

hope that variation in some component or components will be found to correlate with gradations in the quality studied. Thus, during the ripening of melons it has been found that part of the flavor changes can be accounted for by increases in sugar (27); and the changes in texture of peaches and tomatoes with advance of maturity are associated with transformations of protopectin to pectin (28, 29). The ease of browning of the crust of bread during baking depends upon the amount of residual sugar after fermentation (30).

When variations in palatability are dependent upon physicochemical condition (for example, stiffness in gelatin gels which may vary among samples used in the same concentration), it may not be possible to do more than develop physical methods of study.

Evaluation of Qualities Contributing to Palatability. The application of scientific methods to a study of the sensation-producing qualities of foods goes on so rapidly that there is no question about its future. In many cases a more difficult problem is that of measurement of preferences. Which grade or intensity of each quality is most desirable? As already pointed out, such investigations partake of the nature of science only when they become studies not for the evaluation of the preferences themselves, but of their expression, the ways in which they are indicated by human behavior.

A first consideration must be selection of the group whose preferences are to be investigated. This will depend upon the nature and purpose of the study. It may be a group of connoisseurs, a geographic, racial, or economic group. It should be remembered that generalizations must be restricted according to the group chosen. Mealiness is a desired quality in potatoes in the United States, but waxy tubers are preferred on the continent; New York pays a premium for white eggs, but Boston prefers hers to be brown; and thus tastes go.

Furthermore, as Finney (6) has maintained, generalizations derived from such studies differ radically from the generalizations of real science because there are exceptions due to differences in individual preferences. These exceptions have a validity which destroys any pretensions to authority or essential rightness in any standard of taste in foods. If some prefer their potatoes baked at high temperature so that there is considerable dextrinization and caramelization of the surface portions while others advocate baking at lower temperatures to avoid this change, it is not possible to conclude that one group is wrong and the other is right. Each individual's preferences are as valid as those of anyone else. Therein lies the limitation to any ambition for a "science" of palatability.

For most practical purposes for which studies of food preferences are instigated, this theoretical limitation is of little importance. A producer or processor of food is satisfied if he can determine what most of his consumers want. We may get at such preferences by asking the individual directly or by observing his behavior under circumstances which can be considered to represent them. Three technics have been employed in such studies, the survey of demand, the determination of the premiums paid for intensities of a quality, and controlled, direct tests of food preferences.

The demand survey is described by Waugh (31) as "essentially the compilation and summarization of the likes and dislikes of a group of dealers or consumers for varieties, types, grades, and qualities of a commodity as reported by individuals and obtained by personal interviews or by mail." He gives a critical discussion of the demand surveys which are usually carried out by the questionnaire method. Among advantages, he lists the large number of factors that may be considered, the fact that taste, smell, freshness, and other factors difficult to measure objectively may be included, and that the preferences of selected groups may be separated for comparison with those of other groups. Disadvantages are the almost complete impossibility of giving a quantitative rating to the importance of factors on the basis of questionnaire answers, the difficulty of devising questions which do not suggest answers, and the average consumer's ignorance of quality factors and lack of discrimination concerning them.

From such a survey where 1400 questionnaires concerning preferences for quality in apples were sent to housewives in southern New England, Jefferson (32) concluded that the qualities which appealed to the consumer were flavor, appearance, condition, cooking quality, juiciness, and size. Corbett (33, 34) investigated market preferences for fruits and vegetables in Providence, Rhode Island, by this method.

As regards price premiums for quality, one can, by a statistical analysis of records of certain quality factors and the market prices of individual lots of a food, arrive at the price differentials corresponding to different degrees of each of the factors. In a criticism of this method, Waugh (31) concludes that it has the advantage of being more accurately quatitative than the demand survey in measuring consumers' preferences, but that it is limited to the study of such quality factors as can be numerically measured and is not applicable to the study of variations in preferences among various groups of consumers. By its use he was able to conclude that three important quality factors influencing the price

of asparagus on the Boston market were the amount of green color, the average size of the stalks, and the uniformity of stalks within the bunch. "Variations in the amount of green color were found to be responsible for almost three times as much price variation as were variations in the average size of stalks and almost twenty times as much as were variations in the uniformity of stalks within the bunch."Park (35) has secured data on the effect of quality of apples on prices which also indicate consumer preferences. On the whole, the method probably deserves extended use by food researchers when this is the type of problem.

Two types of controlled preference tests are suggested as being applicable to a determination of food preferences. These are direct preference tests and purchase tests.

In making direct preference tests, samples of food representing variations in the quality studied are offered to a group of subjects who are asked to state their preference after making appropriate examination. When several samples are offered for such a test, it is frequently difficult for the subject to remember sense impressions definitely enough to give consistent reports. Psychologists overcome much of this difficulty in securing statements of feeling tone in response to any series of qualities on which reasonably consistent comparative judgments may be passed by what has been called the "method of paired comparisons" (36). Each member of the series is paired and presented for judgment with each of the other members. Thus only two samples are being rated at any one time. By summation of the number of first preferences received by each sample, it is possible to rank the group. The writer does not know of any study applying this method to food preferences, but it would seem to be useful.

As an example of purchase tests may be cited the study made by Williams and Campbell (37) of preferences for different proportions of sugar, gelatin, fat, and milk solids in ice cream. Three variations of one of these ingredients with all others kept constant were furnished to fifty regular daily purchasers in a cafeteria over ten-day periods. On the first day customers were given samples of the three variations and told that they would all be available for a period at the same price. Later purchases were taken as a measure of preference.

This method would seem to possess very desirable advantages in that it offers controlled and relatively objective results. In many university cafeterias where the patronage consists of the same individuals from day to day there should be opportunity to make such tests after relatively simple preliminary announcements. Probably not more than three varia-

tions in quality should be offered at a time. Of course, generalizations should be limited to the type of group tested.

Scoring Intensities of Quality and Preferences for Quality to Give Single-figure Estimates of Palatability in Foods. Comparison of the palatability of different samples of food is greatly facilitated by evaluating each sample in such a way that a single figure stands for its quality. For this purpose score cards are devised which include a series of imaginary scales in which all important palatability factors are numerically weighted to conform with the judgment of the author as to their relative importance. As Mazzola (38) has pointed out, this procedure has gross deficiencies when judged by scientific standards. It is too subjective; the human equation is too large a factor.

For example, suppose that in a study of leavening agents for self-rising flours, results on biscuits were evaluated by a score card giving general appearance (one out of six qualities judged) 12 points out of a total 100 and dividing these points equally between color (6 points) and size and uniformity (6 points). To score color on the basis of a possible 6 points has all of the weaknesses of the imaginary scale, which it really is, and which has already been discussed. Furthermore, no individual can assign reliable relative values to the various factors that describe quality. What can be a valid basis for saying that general appearance should secure consideration to the extent of 12 points out of 100, no more and no less? The conclusions drawn in such a study may be entirely valid in case the particular experimenters developed enough skill to be quite consistent in their scoring; but the person who attempts to duplicate their results or to compare similar procedures certainly faces a difficult if not an impossible task. Yet foods literature is full of examples of this method of reporting results.

Mazzola (38) has devised and used scoring sheets which do not attempt to weigh one quality against another. Each of the major quality factors is subdivided descriptively to aid in securing uniformity of scoring. For example, in a score sheet for canned apples, a range of 9 points is allowed for condition of the inside of the can which is scored 8–9 if bright, 6–7 if dark, and 3–5 if black. When the rating is complete, the record does not show that the can scored 89 or any other number, but that the cans were fairly bright on the inside (rating 8), and so on for each factor. Of course such score sheets are really a group of imaginary scales and are subject to the same criticisms as the latter.

In spite of the difficulties involved in their construction and use, score cards giving single-figure values are so convenient that they will probably

continue to be widely used. Larmour (39) has discussed their importance in the study of flour products and offered criticisms of value in their construction. He suggests scoring against a standardized product, one prepared from standardized ingredients according to a standardized formula by a standardized technic. Probably a high-quality standard is better than a low-quality standard. Furthermore, the qualities considered should be selected and weighted according to the purpose of the investigation. Finally, they should be as definitely described as possible. These last two characteristics are illustrated in a score card prepared by Barackman (40) for use in cake-baking tests in which flour is to be the variable.

In general, we may say that simple score cards prepared according to such standards have practical value for certain industrial and commercial evaluations, especially when they are used by judges of wide experience. As methods of scientific measurement in careful research, they are devices to be discarded as soon as diligence and ingenuity develop more objective and mathematically sound methods of rating.

Summary and Conclusions. The scientific study of the palatability of food consists of the measurement of the intensity of the sensation-producing qualities of food and the rating of these intensities according to preference. The sensation-producing qualities of foods may be measured by comparison with scales or by objective technics and apparatus which give a numerical evaluation. Scales should be concrete, and ideally the variations included should be evaluated numerically.

Palatability ratings for each intensity of the qualities studied should be based on preference studies. These may be demand surveys, studies of price premiums paid for intensities of a quality, or controlled preference tests. Generalizations should be restricted to the groups whose preferences have been studied, since food preferences depend on custom and the experience of the individual.

The commonly used score cards are not scientifically adequate means of recording palatability. They are subject to all of the weaknesses of imaginary scales, and the relative evaluation of different qualities is arbitrarily arrived at.

Scientific technics in measuring palatability qualities are essential not only in insuring the progress of research on foods themselves but in such related fields as the study of household equipment. In a recent report on the application of electricity to domestic uses, a committee of the American Home Economics Association mentioned the importance of a means of measuring "doneness." Research workers are not alone

in their interest in this subject. Teachers, in their attempt to develop standards for appreciation among students and all those in commercial fields who deal with the processing of foods to meet consumer demands, are handicapped by the inaccurate and unrefined methods used in much of the study of palatability.

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Books and Periodicals

NEW BOOKS

Chemistry and Cookery. By ANNIE LOUISE MACLEOD and EDITH H. NASON. New York: McGraw-Hill Book Company, Inc., 1930, pp. 545, $3.50.

The transition period following the acceptance of the electronic theory of the structure of matter has been a difficult one for both the teacher and the student of college chemistry—for the teacher, because few textbooks have been available in which the theory has been presented clearly and simply, and for the student, because in the secondary schools the older theories are still generally taught and the change to the new is confusing. For this reason, if for no other, this volume is a valuable and welcome addition to college textbooks on general chemistry, for it is uncompromisingly based upon the modern electronic theory of matter.

Those who have shrunk from teaching beginning chemistry from this point of view will be interested in the authors' statement, "In our own classrooms we have found that this theory gives to chemistry a concreteness and meaning which is lacking without it, and that its introduction at the beginning of the course results in a saving of time and effort which is incredible to the teacher who has used only the older method."

In content, the volume, which has been written as an elementary chemistry course for home economics students, strikes a happy medium between the excessively "pure" chemistry undefiled by practical illustrations and the disjointed so-called "practical" chemistry in which fundamental truths are used only to explain unrelated phenomena. On the theory that "the fundamental laws which govern the behavior of all matter will have considerable to do with the behavior of foods both in the kettle and in the body" and with the belief that "it would be of little use to select a food because of its special nutritive value and then destroy this nutritive factor by faulty preparation," the authors have developed in logical sequence the modern theories of inorganic and organic chemistry, with illustrations both in the text and in clever questions at the end of each chapter from ordinary household operations and food manipulation. The title "Chemistry and Cookery" is rather a misnomer, for it is not until the thirty-seventh chapter that cookery enters into the table of contents as the main subject matter. Here, chapters on eggs and egg cookery and meat and meat cookery take their logical place after the customary sequence in organic chemistry of hydrocarbons, alcohols, aldehydes, etc., has led up to the chemistry of proteins. From this point on through the forty-fifth and final chapter dealing with batters and doughs and basic recipes, the emphasis is upon foods and cookery. The laboratory manual following the text, likewise deals chiefly with experimental cookery.

The chapters in which the chemistry of foods is the leading interest are not so unique and in certain respects not so up to date as the earlier theoretical chapters. The chief value of the book, in the opinion of the reviewer, lies in the clarity with which the newer theories of chemistry and physics are presented and illustrated by the everyday phenomena of the home. To give but a single illustration—in the chapter on Metals and Their Use in the Household, the theory of displacement

reactions between metals and solutions of polar compounds is presented and illustrated by the reactions of common foods on various metallic utensils. The familiar darkening of an aluminum utensil when such a food as rolled oats is cooked in it, is explained as due to the displacement reaction which takes place between the aluminum and the ionic iron. "The iron having a greater attraction for electrons than aluminum pulls the electrons away from the aluminum, thus forming ionic aluminum and metallic iron." This sounds well, but might easily be forgotten if the practical illustration had not gone one step further. "The tidy but uninformed housekeeper scours the pan and deprives her family of one of the most valuable minerals. If, on the other hand, she is aware of the value of the dark deposit, instead of scouring her pan she cooks tomatoes or some other acid food in it. The hydrogen ions of the acid will be displaced and the iron thrown into solution, and her family will have its iron even though it has been transferred from oatmeal porridge to tomatoes."

It seems a pity that a textbook like this, so up to date in theory and so replete with apt illustrations from everyday life, should, because of its title, be limited to home economics students or at least to women students, for the greater part of the subject matter is of equal value and should be of almost equal appeal to both sexes. Would it not be advisable in future editions to change the title to one which would more clearly represent the broader scope of the book as a modern foundation course in chemistry?—SYBIL L. SMITH, *U. S. Department of Agriculture.*

Everyday Physics. By CARLETON JOHN LYNDE. New York: The Macmillan Company, 1930, pp. 557, $1.80.

This new physics textbook is distinctive because of its numerous helpful illustrations of home equipment and home operations. A careful explanation of each type of appliance precedes the discussion of the principles involved in its construction and operation. Thus, from concrete subjects with which he is familiar, the student is led to know the facts and laws of physical matter. Although the book is designed for use in the secondary schools, it would be suitable for a course in household physics for college students in home economics, to be supplemented by outside reading and laboratory problems. Moreover, the volume should be an excellent reference book for the home library, because its clear explanations of "how the wheels go round" would help in answering many of the family's questions.

Of especial interest to students of home economics are discussions of the fundamental details of the household water supply and sewage disposal; types of stoves, water heaters, and house furnaces; comparison of fuels; gas, water, and electric meters; the design and mechanism of oven and house thermostats; an extended treatment of household refrigeration with diagrams of the ice, gas, and electric types; electric motor-driven appliances, such as washing machines, ironers, fans; the illumination of homes and schoolrooms; and the mechanics of vacuum cleaning. It includes brief explanations of several recent scientific developments: the various thermostats, the use of carbon dioxide in bread baking, a kerosene oil-burning refrigerator, oil burners for house heating, kitchen mixing devices, and so on. Television, the talking moving picture, and the photoelectric cell are also included.

Several minor criticisms of the book might be made. The style, although concise, is sometimes unnecessarily abrupt. The material presented is often too limited for those who have no back-

ground on the subject, and the book would need to be supplemented by others, particularly on the subject of radio. No references for outside reading are included. Despite these slight shortcomings, the book is a welcome addition in its field and should create in the student the interest to learn more about the topics discussed, either by reading or by experimenting at school or in the home. —EVELYN H. ROBERTS, *Washington State College, Pullman, Washington.*

Textiles and Clothing. By ELIZABETH SAGE. New York: Charles Scribner's Sons, 1930, pp. 323, $1.20.

A valuable, interesting attempt to give high school students the information needed for the wise selection of clothing under present-day conditions.

Care of the Infant and Child. A Book for Mothers and Nurses. By HARRY R. LITCHFIELD and LEON H. DEMBO. Baltimore: Waverly Press, Inc., 1930, pp. 138, $1.00.

Two experienced pediatrists bring together in clear, non-technical language the principal facts that persons in charge of young children need to know regarding their development, feeding, and general care.

Creative Dramatics for Upper Grades and Junior High School. By WINIFRED WARD. New York: D. Appleton and Company, 1930, pp. 304, $2.25.

The supervisor of dramatics in the public schools of Evanston, Illinois, here assembles information helpful in planning and directing public school dramatics, with emphasis on the creative type. Included are chapters on directing, costuming, and setting the stage.

Studying the Major Subjects. By CLAUDE C. CRAWFORD. Los Angeles: C. C. Crawford, 1930, pp. 384, $2.00.

A how-to-study manual with detailed advice regarding eleven special subjects of study, including the practical arts.

Research and Thesis Writing. By JOHN C. ALMACK. New York: Houghton Mifflin Company, 1930, pp. 310, $2.40.

A book for graduate students, discussing the nature of research, the more important methods used, and the procedures to be followed in reporting results of research in theses.

How to Supervise. A Guide to Educational Principles and Progressive Practices of Educational Supervision. By GEORGE C. KYTE. New York: Houghton Mifflin Company, 1930, pp. 468, $2.40.

This addition to the Riverside Textbooks in Education discusses the development, philosophy, organization, and technic of supervision, the latter subdivided into helpful discussions of special phases.

Earnings of Women in Business and the Professions. By MARGARET ELLIOTT and GRACE E. MANSON. Ann Arbor: University of Michigan, 1930, pp. 215, $1.50.

The first of a series of monographs reporting an occupational study made by the Bureau of Business Research of the University of Michigan in cooperation with the National Federation of Business and Professional Women's Clubs and their individual members. Includes data on earnings and their relation to such facts as age, experience, community, marital status, dependents, and education; and on the effect of earnings on the social and economic status of the worker.

Catalog of Literature for Advisers of Young Women and Girls. By ANNA ELOISE PIERCE. New York: The H. W. Wilson Company, 1930, pp. 192, $1.25.

A supplement to a briefly annotated, classified list of references to books and articles which was published in 1923 and which includes various subdivisions dealing with topics akin to home economics.

Twenty-Four Views of Marriage. From the Presbyterian General Assembly's Commission on Marriage, Divorce and Remarriage. Edited by CLARENCE A. SPAULDING. New York: The Macmillan Company, 1930, pp. 451, $2.50.

A collection of essays and discussions representing authors of as varying shades of opinion as Paul Popenoe, Bertrand Russell, Maude Royden, the Brinkleys, Judge Lindsey, Walter Lippmann, Groves and Ogburn, Ellen Key.

Standards and Specifications for Nonmetallic Minerals and Their Products, Miscellaneous Publication No. 110, April, 1930, United States Department of Commerce, National Bureau of Standards. Prepared by JOHN Q. CANNON, JR., under the direction of A. S. MCALLISTER, Chief of the Division of Specifications. Washington, D. C.: United States Government Printing Office, 1930, pp. 680, $2.75.

The standards discussed in this volume have an important bearing on the quality of various materials used in building and in household goods. (Of similar value is the earlier volume in the series, "Standards and Specifications in the Wood-Using Industries," Miscellaneous Publication No. 79, 1927.)

Salesmanship. A Textbook for Students of Salesmanship in College, School, or Store. By WILLIAM F. GREGORY. Toronto: The Commercial Text Book Co., 1930, pp. 332, $1.25.

This presentation by a man experienced both in teaching and in practical salesmanship includes information of value to those interested in retail purchasing as well as in salesmanship.

Fads, Frauds and Physicians. Diagnosis and Treatment of the Doctors' Dilemma. By T. SWANN HARDING. New York: The Dial Press, 1930, pp. 409, $3.50.

From his observations and study of the present shortcomings of medical knowledge and practice, the author reaches the conclusion that the public would be more cheaply and efficiently served by a state system of medicine.

The Foundation—Its Place in American Life. By FREDERICK P. KEPPEL. New York: The Macmillan Company 1930, pp. 113, $1.25.

Five Page-Barbour lectures delivered at the University of Virginia by the president of the Carnegie Corporation on "the development of philanthropic endowments and their present activities in relation to education and scientific and social progress" in the United States.

ABSTRACTS FROM PERIODICALS

CHILD DEVELOPMENT AND PARENTAL EDUCATION

EDUCATIONAL METHODS

Play materials for the preschool child, HARRIET M. JOHNSON. *Am. Childhood* **16,** No. 4 (1930, Dec.) pp. 10–11, 61+.

An analysis of children's play as an educational process, and of the selection of playthings to meet the needs of children of different ages.

Child Study **8,** No. 2 (1930, Oct.) pp. 35–43.

How to attain desirable health attitudes, GEORGE K. PRATT, pp. 35–37;

The dynamics of health habits, GEORGE J. MOHR, pp. 37–39;

Posture—a reflection of the emotional status, WILLIAM BURDICK, pp. 39–40;

Critical approach to health education, MARION M. MILLER, pp. 41–43.

Positive health, not absence of disease, is shown to be the desirable and attainable attitude.

Child Study **8,** No. 3 (1930, Nov.)

Under the editorship of Harry Emerson Fosdick, who offers a searching foreword, the subject "Religion in the present-day home" is discussed helpfully and authoritatively.

Many questions, JOHN LOVEJOY ELLIOTT, pp. 64–66;

How shall we think about religion? WILLIAM H. KILPATRICK, pp. 67–69, 84;

When children ask about God, SOPHIA LYON FAHS, pp. 70–72;

Religion and the adolescent, GRACE LOUCKS ELLIOTT, pp. 73–74;

Something about Sunday school children, ANGUS HECTOR MACLEAN, pp. 75–76;

The religion of a scientist, FLOYD H. ALLPORT, pp. 77–79, 86+;

May a parent speak? p. 80;

The Bible and its times in stories for children, a book list, with brief annotations, pp. 85–86.

Development of oral language in the kindergarten, MAY HILL. *Childhood Educ.* **7,** No. 3 (1930, Nov.) pp. 124–130.

It should be recognized that major responsibilities of the kindergarten are: mastery of oral language with spontaneous expression; accuracy in the use of words; the ability to carry a series of ideas in mind; correct language use, involving pronunciation, enunciation, and grammatical form; and the appreciation for and play with words essential to creative expression in young children. Successful methods for achieving these objectives are discussed.

Language and growth: the relative efficacy of early and deferred vocabulary training, studied by the method of co-twin control, LOIS CURRY STRAYER. *Genetic Psychol. Monographs* **8,** No. 3 (1930, Sept.) pp. 215–317.

Detailed report of an experiment with twins of identical developmental levels who were separated at the age of 84 weeks and placed in controlled environmental situations for 5 weeks, that of twin C completely nonverbal, while twin T was given definite language training. Then, at 89 weeks of age twin C was for four weeks given the same language training previously given T, and their development was compared. Results show striking similarity of the typical stages of development in the acquisition of lan-

guage, though in every phase C was slightly in advance of T. Thus a maturation level of even five weeks has a definite influence on the relative effectiveness of training and upon the general pattern of behavior. Training, while not transcending maturational level, was to some degree effective in increasing vocabulary, as T's vocabulary (40 words) was the greater at the end of the experiment. Even the intensive training given was not effective in overcoming their developmental retardation.

The relation of nervous-emotional stability to educational achievement, NOEL KEYS and G. H. WHITESIDE. *J. Educ. Psychol.* **21,** No. 6 (1930, Sept.) pp. 429–441.

Data involving 182 children are presented here and show that there is a satisfactory correlation between teachers' ratings and test scores for nervous and emotional traits; that the accomplishment quotient should not be used to compare the relative educational achievement in groups which differ widely in chronological age and I.Q.; that when children comparable in every respect except nervous and emotional traits are tested, the unstable children tend to average appreciably lower in grade placement and educational achievement than the emotionally stable. In grades 6 to 8, nervous and emotional children averaged one year retarded in age-grade status, 2 months lower in mental and educational age, and 18 points lower in I.Q. than did their markedly stable classmates. "There is no tendency for nervous and emotional stability to go with superior intelligence and knowledge, but rather a well-marked and reliable tendency for pupils conspicuously nervous and emotional to fall far below the emotionally stable in intelligence and school standing."

Generalization of bright and dull children, a comparative study with special reference to spelling, H. C. CARROLL. *J. Educ. Psychol.* **21,** No. 7 (1930, Oct.) pp. 489–499.

Marked differences are shown in the kind and number of errors in spelling made by bright and dull children, the dominating factor apparently being phonetic generalization. The bright child with a high degree of ability to translate sound into letters makes errors which are a natural result of the varied phonetic qualities of the language; the dull child, less able to adjust himself to a new situation, makes errors with little phonetic foundation.

A comparison of difficulty and accuracy in the learning of bright and dull children in a motor-memory task, FRANK T. WILSON. *J. Educ. Psychol.* **21,** No. 7 (1930, Oct.) pp. 507–511.

In this learning test with a form board, the same pieces were hardest and the same easiest for dull and bright, young and old children. The older and brighter made fewer errors and a higher percentage reduction of errors than the young and dull children who persisted more generally in their errors. The brighter children were markedly superior in accuracy.

An investigation of the effect of the emotional factor on the intelligence quotient, S. R. LEAHY and E. J. FOX. *J. Juvenile Research* **14,** No. 4 (1930, Oct.) pp. 260–266.

A comparison of the intelligence quotients obtained for individuals showing emotional tension and those showing none, with retests after an interval averaging 14 months, shows a smaller gain in the I.Q. of the emotional group on the retest than for the non-emotional group. This is at variance with the expectation

that emotional tension would be a disadvantage during a test and may indicate either that a mild emotional factor does not influence the intelligence factor during tests, or that it is something characteristic of the individual, probably always present. The constancy of the I.Q. is thus further upheld.

Speech training for backward and for defective children, EILEEN C. MACLEOD. *Ment. Welfare* [London] **11,** No. 4 (1930, Oct. 15) pp. 89–92.

First of a series in which the possible causes of retarded speech in backward (not mentally deficient) children are shown to be physical, as deafness, general ill health, or illness between 1 and 3 years; psychological, as retarded mental development, or word-deafness; and environmental, as from neglect, over-anxious parents, fear, school situations, etc. The history is presented of a case of a type seldom recognized, in which the cause of the retarded speech was entirely environmental.

An increased program for the Washington Child Research Center, MANDEL SHERMAN. *School Life* **16,** No. 3 (1930, Nov.) p. 47.

A brief résumé of the expanded program of the Center, noting its new quarters, the addition of the 3½-to-5-year group, and further development of the research program.

Berkeley's coordinated program of child adjustment, ELISE H. MARTENS. *School Life* **16,** No. 3 (1930, Nov.), pp. 56–58.

Description of the clinic handling behavior problems of public school children, and a summary of the significant items in the city's program in the interests of exceptional children in the schools.

Growth curves and I.Q.'s, as determined by testing large families, ANGELINE M. KEEN. *School & Soc.* **32,** No. 831 (1930, Nov. 29), pp. 737–742.

A proposed method, with tables, is presented for computing the intelligence quotient, which is held to be a more accurate measure than those commonly used since it takes into consideration the fact that growth is curvilinear rather than rectilinear.

MENTAL HYGIENE AND BEHAVIOR PROBLEMS

Psychiatric aspects of enuresis, FORREST N. ANDERSON. *Am. J. Diseases Children* **40,** No. 3 (1930, Sept.) pp. 591–618; No. 4 (1930, Oct.) pp. 818–850.

A detailed and exhaustive review of the subject, dealing with the age, sex, physical, pathological, and social factors. The conclusions are conveniently classified into those factors which are believed to be significant in causation, those about which only tentative conclusions may be drawn, and those which are believed to be unrelated to the subject. A bibliography of 199 titles is listed.

The environmental background of juvenile delinquency, LEONHARD SEIF. *Arch. Neurol. & Psychiatry* **24,** No. 5 (1930, Nov.) pp. 921–929.

The author holds that every child starts life with an actual inferiority. In the gradual rise from the weakness of babyhood through 16 or 18 years of childhood, environmental surroundings and the attitude of those in authority determine the adult mental state and usefulness. Neurosis and delinquency are not inherited but acquired. Unusual handicaps, such as loss of limb, can be partially overcome by proper direction and attitude. Faulty behavior can be intensified by the all too frequent placement of blame upon bad heredity. The

child reflects the faults of its educators—parents and teachers first, then clergymen, physicians, social service workers. Educators must see their responsibility to direct the child understandingly into social usefulness; and progress will depend upon the cooperation of home, school, and community.

A study of certain traits of young delinquent boys, DOROTHY K. TYSON. *J. Juvenile Research* **14,** No. 4 (1930, Oct.) pp. 280–289.

In a survey of the extent and seriousness of 33 undesirable characteristics among 246 boys in a correctional school, ten were outstanding in the order named: laziness, disobedience, resentment toward discipline, inattentiveness, quarrelsomeness, lying, swearing, filthy language, instability of mood, and bullying. The outstanding fault reported by cottage supervisors was swearing; by trade instructors, resentment toward discipline; by teachers, laziness. A comparison of these findings with those of a control group is necessary before making an interpretation of their significance.

PARENT EDUCATION

Child Study Association of America, SIDONIE M. GRUENBERG. *J. Juvenile Research* **14,** No. 4 (1930, Oct.) pp. 243–249.

A survey of the Association, its program and activities. Significant recent trends noted are the expanding interest of parents in fields of education and psychology; the extension of interest in child study to groups of immigrant mothers, colored communities, student nurses, and other well-defined groups; and the training of study group leaders.

Parent education in southern California, GERTRUDE LAWS. *J. Juvenile Research* **14,** No. 4 (1930, Oct.) pp. 250–255.

The work of the southern division of the California Bureau of Parent Education has been of four types: assistance to local leaders in parent education, introduction of the work in new communities, development of leaders in some communities to a point where the work can be maintained locally, and interpretation of parent education to varied groups. Its objectives are to develop appreciation of child activities and interests as "life" rather than as "preparation for life," to give an increased understanding of school procedures, to help develop skill in observation of children's interests and activities, to develop ability to recognize adult practices which affect child conduct, to increase understanding of mental health, to improve their approach to problems of human relationships, and to develop a basis for discrimination in the field of psychology.

Parent education as an experiment in a city school system, PAULINE GARTZMANN. *J. Juvenile Research* **14,** No. 4 (1930, Oct.) pp. 256–259.

A discussion showing the philosophy behind the experiment which has placed the author as director of parent education in the Pasadena (California) city schools and incorporated the subject in the curriculum.

PHYSICAL DEVELOPMENT

Sickness records in school hygiene, JEAN DOWNES. *Am. J. Pub. Health* **20,** No. 11 (1930, Nov.) pp. 1199–1206.

The proposal to supplement annual examination of school children with records of the conditions or diseases causing all pupils' absences for which sickness is given as a reason, was tried out for two years in a graded school, with the results here given in detail. It appears that of the children who were absent from sickness during the year, but a small proportion had shown any seri-

ous defects upon physical examination. Thus physical examination alone is a poor indication of the extent to which the child is actually sick and should be supplemented by the use of sickness records as a means of discovering conditions needing correction.

A follow-up of children needing glasses. *Child Health Bull.* **6,** No. 6 (1930, Nov.)

In a check-up on 750 children ordered by a school eye clinic to get glasses, it appears that 591 had complied, that of 87 who failed over half did so because either parents or pupils were not convinced of the need. Of 63 pupils who failed to wear the glasses provided the cause was as frequently not liking to do so, as losing or breaking them. The vanity of adolescence was apparently a factor in non-compliance. Tables showing distribution of defects by age groups and by grades are given, and it is concluded that such check-ups are important in the school health program.

The clinical examination and diagnostic teaching of cases at the psychological clinic of the University of Pennsylvania, ARTHUR PHILLIPS. *Psychol. Clinic* **19,** No. 6 (1930, Nov.) pp. 169–200.

Part 1 of this paper gives a classification of the 72 child cases examined during the summer session which shows approximately 30 per cent to be superior, 30 per cent normal, and 40 per cent intellectually inferior; cases typical of each group are described. Part 2 analyzes 25 cases of reading difficulties, showing the common primary causes to be sensory defects, non-development of the visual memory for letters and words, limited capacity for associability, and "fixating" or "fluctuating" types of attention, with the factor of motivation as a contributing rather than a primary cause; and, as secondary factors, inadequate instruction, faulty reading habits, and acquired aversion to reading induced by sense of constant failure. In the six case studies presented, the I.Q.'s ranged from 99 to 138 and the primary causes were in two cases defective vision, in two limited associability as indicated by a deficit in attention span, and in the remaining two non-development of the cerebral visual memorial area for letters and words.

H. R. H.

ECONOMIC AND SOCIAL PROBLEMS OF THE HOME

Price weapon used mercilessly on national brand foods. *Business Week* No. 51 (1930, Aug. 27) pp. 13–15.

Whether retail food prices lag behind commodity rates, and whether the lag is greater in nationally advertised brands than in those of the chains are two questions discussed in this article. Figures are given to show that the chain store makes a percentage reduction in the price of the final product approaching that of the original commodity. Thus, when there was a 36 per cent decline in wheat, a large chain cut the retail price of flour 23 per cent. During the same period the retail price of a nationally advertised flour was cut only 12 per cent. Some national brands are cut more than others. It is claimed by the companies that often their cuts are not passed on by the retailer. The chains are using the price weapon in their efforts to substitute their brands for national brands.

Consumer, 1930 model, is older, moves oftener, to smaller home, *Business Week* No. 57 (1930, Oct. 8) pp. 22–23.

The Boston Conference on Retail Distribution made a special study of the consumer. Smaller families and the increased life span have affected retailing, since there are now relatively fewer children and more adults to be provided for than formerly. Smaller houses and apartments mean lessened purchases of furniture and furnishings. So do built-in conveniences. The decrease in home baking means fewer sales of kitchen utensils but more business for the baker. Chain stores were also under discussion. It was estimated that 35 per cent of the nation's food was distributed through national chains, 25 per cent through voluntary chains, and 40 per cent through independents.

Institutional convalescence, E. H. Lewinski Corwin. The Committee on Costs of Medical Care, Miscellaneous Contributions No. 1 (1930, Oct.) pp. 8.

The provision of institutional care for convalescent patients is one aspect of the problem of illness which hitherto has been but little studied, despite its economic and medical significance. Such data as the author finds, indicate that few cities have adequate facilities for caring for convalescents. They must go directly from hospitals to their homes, which often do not furnish proper conditions for their recovery, especially in low-income families. Nevertheless, the stay at the hospital is usually cut to a minimum because of its cost. It should be possible to care for a person in a convalescent institution for about half as much as in a hospital. Convalescent care is especially needed by women after childbirth, for certain types of post-operative cases, by persons suffering from pulmonary or cardian infections, or by those suffering from certain chronic diseases.

The independent, et al., versus the chains, Boyce F. Marlin. *Harvard Business Rev.* **9**, No. 1 (1930, Oct.) pp. 47–56.

The main criticisms of chain stores are evaluated by the author, who concludes that the majority of the indictments are without valid foundation. Various methods by which independent stores can fight the chains intelligently are described, for example, the "voluntary chains." These are able to compete with the chains on a price basis. In addition, certain chains must meet the competition of certain others. Thus, drug chains compete with grocery chains in sales of

some canned foods. As chains grow larger their personnel problems increase, a difficulty not shared by the independents. Many states have attempted to enact legislation against the chains. Much of this has been declared unconstitutional, but license fees and graduated taxes on gross sales have been upheld. Independents will probably find that relying upon public sympathy and legislative action will not enable them to combat chains as effectively as will more efficient management and associations for buying.

Consumers' cooperative societies in 1929. *M'thly Labor Rev.* **31,** No. 4 (1930, Oct.) pp. 831–844.

Persons interested in consumers' cooperation as one means of solving the problems of the household buyer will welcome these data from the United States Bureau of Labor Statistics concerning 656 cooperative societies operating in 1929. The lines of business followed by these societies (whether general stores, filling stations, bakeries, or other retail agencies), their membership, total sales, operating expenses, and division of profits, are shown.

Credit union movement in the United States in 1929. *M'thly Labor Rev.* **31,** No. 5 (1930, Nov.) pp. 1045–1055.

The credit union as a cooperative credit society helps the small-salaried man or the wage earner without banking connections to obtain small loans when money is needed. In December, 1929, there were 974 such societies in the United States, as compared with 284 in 1925. This growth is due largely to the need of families and individuals of small means for some avenue of credit other than the pawn shop or the loan shark. The membership usually is restricted to persons having a common bond of association or occupation, as it is desirable that members know each other. The average loan made by these societies during 1929 was $39. The rates of interest most commonly charged were 6, 8, and 12 per cent. Data are furnished as to business done, resources, operating expenses, requirements for loans, and occupations of members. It is believed that these societies help to turn thriftless, creditless, and moneyless persons into saving, stable members of society.

Chains versus independents, Edward G. Ernst and Emil M. Hartl. *Nation* **131,** No. 3410, pp. 517–519; No. 3411, pp. 545–547; No. 3412, pp. 574–576; No. 3413, pp. 606–608 (1930, Nov. 12, 19, 26; Dec. 3).

The results of an investigation of chain stores by the authors are given in four articles: "The Price War," "Chain Stores and the Community," "Chain Management and Labor," and "The Fighting Independents." Prices were found to be lower in chain stores than in independents, the latter being 7.3 per cent higher on 124 standard items. The chains have forced manufacturers to lower prices to them because of their large purchases. Have these price reductions by manufacturers resulted in lower wages for factory workers, or in lessened profits? The salesmen in chain stores were found, in most instances, to be paid less than those in independent stores. However, the chain store offers opportunities for the salesman to rise to the position of manager, and for managers to be promoted to larger stores. The chains have taught the possibilities of economy of large-scale distribution. They should be accepted as economically sound, but attempts should be made to control them.

A scale for measuring social adequacy, MARY JOSEPHINE MCCORMICK. *Social Science Monographs of the National Catholic School of Social Service* **1**, No. 3 (1930, Oct. 15) pp. 73.

Social adequacy is defined by the author as "the quality by which a family is able to preserve its domestic life without unusual aid from the community." Families unable to meet the problems of everyday life without aid from social agencies and institutions are subadequate. A superadequate family not only maintains its own life but contributes financial aid or personal service to the solution of social problems. An adequate family lies between these two classes. In order to make possible a quantitative measurement of social adequacy, the author has worked out a scale by means of which families can be scored for this characteristic. The score card has four main divisions: quality of neighborhood where the family lived; education, occupation, and civic status of members of the family; material status of the home; cultural and social influences. Objective tests were used in determining the scale. Thus, the score for cultural and social influence depended upon such items as the number of daily papers taken, the presence of radio, telephone, electric lamps, and separate living room; membership of the parents in various associations; recreational facilities provided for the children.

The uniform child labor law, FLORENCE KELLEY. *Survey* **65**, No. 2 (1930, Oct. 15) pp. 84–85.

An analysis of the draft of the uniform child labor law adopted at the Conference of Uniform State Laws, and later approved by the American Bar Association. Mrs. Kelley finds the draft unsatisfactory in that it exempts from the provisions of the law all children working in agriculture and boys nine to fourteen who are selling newspapers and periodicals. States now having fifteen or sixteen years as the minimum age limit for factory work would step backward if they adopted the uniform draft which sets fourteen as the minimum age.

When the small man borrows. *Survey* **65**, No. 3 (1930, Nov. 1).

The greater portion of this issue of the *Survey* is devoted to the problems arising when the small man borrows. "The Jones Family, Inc." by Rolf Nugent emphasizes the fact that the family is a financial as well as a social unit. As a "going concern" its balance sheet should show some of the characteristics of that of a well-run business. However, many solvent families have a small margin of safety to provide against emergencies. Without reserves, undue credit expansion by the family is not sound accounting. In Kentucky in 1929, bankruptcy records showed that in the five largest cities, running a family was more hazardous financially than running the average business, the number of bankrupts per hundred thousand being higher. Balance sheets of 266 of these bankrupt families showed average liabilities of $961, $138 of which was due on installment purchases, $130 to loan companies, and $540 on miscellaneous debts. Family solvency must be taken into account by students of national business trends. "Bootleg Lenders," by Leon Henderson, discusses the control of loan sharks. "The Spread of Credit Unions," by Edward A. Filene, and "Riding the Credit Union Circuit" by Roy F. Bergengren describe the spread of cooperative credit societies. "Mass Credit" by Evans Clark furnishes a borrower's guide, showing types of agencies to which the small borrower may turn and their usual annual interest

rates, and concludes that mass-credit agencies should be given a semi-public utility status, their rates being subject to control on the basis of a scientific study of operating costs and net income.

Cities fit to live in, JOHN NOLEN. *Technology Rev.* **32,** No. 6 (1930, Apr.) pp. 3–7.

In two recently published books, "The City of Tomorrow and Its Planning" by Le Corbusier and "Our Cities Today and Tomorrow" by Theodora and Henry Hubbard, Mr. Nolen finds cogent suggestions for future development of American cities. Le Corbusier's plans for residential districts provide for six-story apartment buildings in large parks or gardens, the buildings to occupy only 15 per cent of the land in such a zone. Immediately outside the city would be a protected zone, city owned, consisting of woods, fields, and grounds for sports. The Hubbards also stress the need for sufficient open land in residence districts. Nolen recognizes the difficulty of achieving these projects but believes that we are on the verge of a pronounced change.

Standards of living, E. L. KIRKPATRICK. Published by the Extension Service of the College of Agriculture, The University of Wisconsin, and the American County Life Association for the 1930 Country Life Conference. University of Wisconsin, Circular No. 241 (1930, Sept.) pp. 79.

After a brief discussion of the use of the phrase "standards of living" and of recent studies of the expenditures of rural families, the author (who acknowledges the cooperation of a committee of consultants) turns to various factors involved in the improvement of ways of living. The topics considered are: ability to pay and standards of living, rural electrification and transportation, time for work and leisure, making the most of home resources, the artistic in country life, community opportunities and policies, poor relief and administration. Pertinent questions are raised concerning each topic, as: Just what is or should be the relation of time for work and leisure to the standard of living? Which ways of using leisure are most worth while? How can the farm work day and week be cut to provide leisure? It was the hope of the author and the committee that these questions might lead to study and discussion by local groups as well as by the several forums of the 1930 American Country Life Association Conference.

D. M.

FOOD AND NUTRITION

Contributed by the staff of the Nutrition Section, Bureau of Home Economics, United States Department of Agriculture

The problem of dental caries, R. W. BUNTING, F. P. HADLEY, P. JAY, and D. G. HARD. *Am. J. Diseases Children* **40,** No. 3 (1930, Sept.) pp. 536–548.

A study was made of the factors instrumental in the cause and control of dental caries in several large groups of children in various institutions. Mouth washes were furnished daily to certain of the groups and the dietary programs of all the children were investigated. While there was evidence that dental caries is a specific infective process, provision of a well-balanced, adequate diet had a greater effect in arresting caries than the various mouth washes used. However, opinion differs as to whether the ideal diet brings about a condition unfavorable to the growth of invading bacteria or merely hardens the tooth.—E. P. D.

Avitaminosis B in relation to tumor growth, E. GILROY. *Biochem. J.* **24,** No. 5 (1930) pp. 1384–1389.

The author suggests "that the high arginine content of foods rich in vitamin B accounts for the fact that diets rich in vitamin B stimulate tumor growth." The arginine content of caseinogen is not reduced by the processes employed for removal of the vitamin B complex and "this may explain the observations that vitamin B deficient diets do not retard the rate of tumor growth." The growth of a transplantable tumor (M 63) in mice on a diet deficient in vitamin B is affected only if the general health of the animals is impaired. Arginine apparently is toxic to mice on a B-deficient diet. Addition of wheat germ and yeast to the diet renders it toxic to males only.—C. H. M.

Hemoglobin maintenance and production upon synthetic diets, including modifications in the ethyl xanthate and Biazzo methods for copper analysis. I. D. L. DRABKIN and C. S. WAGGONER. *J. Biol. Chem.* **89,** No. 1 (1930, Nov.) pp. 51–75.

A critical study of the Biazzo and the potassium ethyl xanthate methods for the determination of copper has shown them to be inaccurate, and the investigators have modified these procedures. Rats, severely anemic on a whole milk diet, regenerated hemoglobin and showed a prompt recovery when placed upon synthetic rations which furnished the animal with less copper per day than the milk had furnished. A diet containing no vitamins and furnishing as salts only sodium chloride and an iron salt (0.2 mg. iron per rat per day) regenerated hemoglobin. Without the addition of iron the synthetic ration did not effect a cure, yet the addition of the same iron salt in the same quantity to the whole milk ration did not prevent anemia. Results indicate that rats recieving larger amounts of copper in their diet are no more resistant to anemia than those getting only very small amounts of copper. From the evidence obtained in these experiments the investigators conclude that the specificity of copper in hemoglobin formation becomes questionable.—E. P. D.

Soft pork studies. IV. The influence of a ration low in fat upon the composition of the body fat of hogs, N. R. ELLIS and J. H. ZELLER. *J. Biol. Chem.* **89,** No. 1 (1930, Nov.) pp. 185–197.

In a study of the effect of a diet low

in fat upon the amount and nature of the body fat produced in animals, young pigs were placed on a ration of brewers rice, alfalfa meal, and blood meal. Results showed that normal quantities of fat were stored. These observations confirmed evidence reported by other investigators to the effect that a low fat ration produces a normal amount and a harder, more saturated body fat than a ration of high fat content. There was a gradual increase in the amount of saturated fat with increase of weight of the pigs up to 100 pounds and a gradual decrease in the linolic acid content until a weight of approximately 170 pounds had been reached. Oleic, palmitic, and stearic were the principal fatty acids found in the fat.—E. P. D.

The stability of vitamin G as measured by its growth-stimulating effect, N. B. GUERRANT and W. D. SALMON. *J. Biol. Chem.* **89,** No. 1 (1930, Nov.) pp. 199–211.

A study was made to determine the effect of heat, H-ion concentration, oxidation, reduction, de-amination, and ultraviolet irradiation upon the growth-promoting activity of vitamin G in yeast or yeast extract. The authors found that autoclaving either the yeast or extract for four hours at 20 pounds caused a loss in activity. Heating dry yeast 4 hours at 120°C. produced a similar loss. Gaseous oxygen had little effect and hydrogen sulfide no effect upon the growth qualities of yeast extract after 4-hour treatments. The effect of de-amination on yeast extracts appeared to depend upon side reactions rather than upon de-amination of the free amino groups. Irradiation of yeast extracts 20 cm. from a mercury arc caused some decrease in their growth-stimulating property and the destructive effect was found to be greater in alkaline than in acid solution.—E. P. D.

The effect of crude fiber on calcium and phosphorus retention, M. A. Bloom. *J. Biol. Chem.* **89,** No. 1 (1930, Nov.) pp. 221–233.

Metabolism experiments using rats were carried out to determine the effect of crude fiber in the diet upon the retention of calcium and phosphorus by the body and to note any differences in the availability of these elements obtained from raw and cooked spinach. A diet containing spinach ash but none of the crude fiber caused a higher retention of calcium and phosphorus than the same ration to which the whole spinach had been added. The addition of very large quantities of ashless filter paper to the diet containing the spinach ash still permitted a high retention of calcium and phosphorus. From these results the author concludes that the low retention of these minerals when spinach is fed "is not due to any unsuitableness in the ash, nor to the cellulose as such, but to some other characteristic of the spinach calcium and phosphorus such as their state of combination, lowering their availability." Raw and cooked spinach showed no significant differences as a source of calcium and phosphorus.—E. P. D.

Evidence for the presence of a third factor in the vitamin B complex of yeast, G. Z. WILLIAMS and R. C. LEWIS. *J. Biol. Chem.* **89,** No. 1 (1930, Nov.) pp. 275–288.

Aside from the antineuritic and pellagra-preventing factors found in yeast, these investigators found a third distinct principle which is thermostable and required for optimum growth and health of rats. It is insoluble in water and alcohol and appears to be similar to the factor described by Hunt but unlike all others reported.—E. P. D.

A study of the antimony trichloride color reaction for vitamin A. III. The ef-

fect of concentration of reagent used, and the stability of the chromogenic substance to light, E. R. NORRIS and A. E. CHURCH. *J. Biol. Chem.* **89**, No. 1 (1930, Nov.) pp. 421–435.

In continuing their study of the antimony trichloride color reaction for vitamin A, the authors found that a variation in the concentration of the antimony trichloride reagent caused only a slight variation in the observed color, provided the tests were made in a range of low color values. Wave lengths of light less than 500 mm. destroy in the cod-liver oil the substance, considered to be vitamin A, which is responsible for the color reaction with antimony trichloride. Wave lengths greater than 500 mm. apparently have a negligible effect. Consequently, after 30 seconds the degree of color caused particularly by the more concentrated oils is dependent upon the light used in its measurement.—E. P. D.

The toxic effect of fish liver oils, and the action of vitamin B, E. R. NORRIS and A. E. CHURCH. *J. Biol. Chem.* **89**, No. 1 (1930, Nov.) pp. 437–449.

In experiments planned to test the vitamin A potency of cod-liver oils, it was found that the feeding of higher amounts of certain of the oils caused a condition in the animals resembling symptoms that accompany a vitamin B deficient diet. Further investigation appears to show that the condition is caused neither by hypervitaminosis due to excess of vitamines A or D nor by an insufficiency of vitamin B in the ration. Isoamylamine and choline in amounts which might be found in cod-liver oil produced paralysis, convulsions, and lack of growth, all of which could be avoided by additional amounts of yeast in the diet. The authors point out the dangers of using cod-liver oil of unknown toxicity in vitamin B determinations. They also show that yeast used in the basal diet may be a source of error in the quantitative determination of the vitamin A in cod-liver oil.—E. P. D.

The iron requirement in early childhood, M. S. ROSE, E. MCC. VAHLTEICH, E. ROBB, and E. M. BLOOMFIELD. *J. Nut.* **3**, No. 3 (1930, Nov.) pp. 229–235.

A report is given of an iron metabolism study, the subject of the experiment being a healthy girl 2 years and 7 months old, weighing 13.95 kg. During the experimental period of 9 days the subject was under the supervision of one of the investigators day and night. No other change was made in the mode of living. As regards the diet, the child was given milk, toasted whole wheat cereal, orange powder, toast, pea pulp, potato (cooked), prune pulp, and white bread, a very slight modification of her usual diet. The food and excreta were analyzed for iron by the Zimmerman-Reinhardt method. The average daily intake was found to be 4.64 mg. and average daily balance of iron was negative to the extent of 1.10 mg.

The authors conclude that this child was close to her minimum requirement in iron although she was maintaining a level of hemoglobin above the average for supposedly normal children of her age, and although her diet was at the level of 0.5 mg. of iron per 100 calories. They recommend a standard of at least 0.75 mg. of iron per 100 calories for a child of 2 to 3 years.—H. W.

The vitamin B and G contents of certain yeast samples, E. J. QUINN, F. B. WHALEN, and J. G. HARTLEY. *J. Nut.* **3**, No. 3 (1930, Nov.) pp. 257–263.

An assay of five different yeast samples has shown that though the concentration of vitamin B (B_1) varies considerably, the G (B_2) content is fairly uniform. This variation does not seem to be dependent

entirely on the method of drying used. The vitamin G content was the limiting factor in the two samples of brewers yeast, while in the other three yeasts it was the vitamin B.—G. M. D.

A study of the absorption and retention of vitamin A in young children, J. I. ROWNTREE. *J. Nut.* **3,** No. 3 (1930, Nov.) pp. 265–289.

In vitamin A retention studies with a number of infants and preschool children, the authors used the rat-growth method to determine the vitamin A content of food and excretions. Their results show that there is no loss of this factor through the urine, but that a marked loss does occur in the feces, apparently running parallel with the fecal fat excretion. The greatest loss and also the greatest retention occurs with the greatest intake. Where diets low in vitamin A were fed, negative balances were found. Experiments indicate that vitamin A from egg yolk and that from cod-liver oil are equally well utilized.—G.M.D.

Meat in nutrition, I–III. *J. Nut.* **3,** No. 3 (1930, Nov.) pp. 303–330.

I. Preliminary report on beef muscle, P. M. NELSON, M. H. IRWIN, and L. J. PEET, pp. 303–311.

In this work the effect of feeding lean beef muscle as the main protein constituent of an otherwise supposedly adequate diet on the growth and reproduction of three generations of albino rats has been studied. Though this meat diet (meat protein 14.2 per cent) was found suitable for growth and reproduction, it was not adequate for lactation and led to cannibalism and failure of the milk supply. Hair balls were found in the stomach and intestines of the adult rats and were considered as causing early senility and sometimes death. Modification of the diet by increasing the yeast, the salt, or the protein content caused no improvement in lactation.

II. Some dietary factors influencing lactation, L. J. PEET, P. M. NELSON, and E. M. SMITH, pp. 313–323.

In a continuation of the previous work the authors report the effect of certain supplements (autoclaved yeast, tikitiki, lemon juice, wheat-germ oil, increased meat protein, increased meat protein plus additional yeast) to the basic meat diet which had proved inadequate for the lactation requirements of rats. All diets except the basal enabled mothers to bear young at approximately the normal age save in a few cases on the high meat diet where the onset of pregnancy was delayed. Tikitiki, wheat-germ oil, and the basal diet were least efficient in maintaining weight of the mother during lactation.

In the three generations studied, the increased meat diet plus 15 per cent yeast allowed mothers to nourish the greatest percentage of their young until the weaning period; the growth response of the young of this group was also the greatest. If, however, only the first two generations were considered, the largest percentage of young reared was in the group fed the additional autoclaved yeast.

III. Hemoglobin formation, L. J. PEET, E. A. SMITH, and P. M. NELSON, pp. 325–330.

The hemoglobin concentration was determined in 82 of the young rats, reported in the previous study, which had been fed different supplements to the basic diet in which lean beef muscle was the chief source of protein. Diets which contained increased percentages of yeast, autoclaved yeast, lemon juice, or wheat germ during the lactation period led to greater hemoglobin formation than did diets in which the protein alone had been increased.—G. M. D.

HOUSEHOLD EQUIPMENT AND MANAGEMENT

Farm house conditions and needs, DEANE G. CARTER. *Agr. Eng.* **2,** No. 9 (1930, Sept.) pp. 304–306.

A summary of the data obtained by personal investigations of 515 typical farm homes in 5 areas in Arkansas show that the quality of the housing increases with the size of the farm, especially on farms of 120 acres and over; that there are no definite trends of location; that the typical construction is frame, without basement, storage, and kitchen cabinet space and in half the cases with insufficient foundations; that lighting, both natural and artificial is inadequate; that some labor-saving and convenience equipment is found in the better homes, but in general, provision for sewage disposal, safe running water, and power appliances present major problems; that houses average 22 years in age, with 2½ per cent probable new construction per year; that average owner residence in one house is 12 years per family, tenant residence, 3 years; that floor area of the average farm house is 250 square feet less than in typical commercial plans, with that in one-fifth of the houses obviously inadequate; that the average number of rooms is 5.35, or one room per person, with no correlation between size of house and size of family; that sleeping room space is insufficient; with one-third of the families having less than one sleeping room for each two persons.

Basic factors in farm home planning, DEANE G. CARTER. *Agr. Eng.* **2,** No. 9 (1930, Sept.) p. 306.

In addition to the architectural and construction features, the design and planning of a farm home (in Arkansas) should represent a house suited to the farm of which it becomes a permanent part; an investment in proportion to the farm investment; a design suited to a succession of families of varying needs, and appropriate to the class or group that will occupy it; a cost within the owner's ability to pay; recognition that the owner must provide the equipment and utilities for health, sanitation, comfort, and labor saving; and recognition that the specifically rural needs, such as office room, wash room, large dining room, which are often recommended, are of minor importance compared with general housing demands, since the cost of housing and the limited income per farm restrict building to the bare essentials.

A house for the farm family, GRETA GRAY. *Agr. Eng.* **2,** No. 10 (1930, Oct.) pp. 335–337.

The specific housing requirements for comfortable farm living are provided for in the flexible plans which are here presented and discussed.

New model dwelling on lower East Side [New York]. *Better Times* **11,** No. 31 (1930, Nov. 3)

Account of a cooperative housing project in which workers may buy apartments at $500 per room, plus a monthly maintenance averaging $12.18 per room, with provision for financing the purchase. Adequate garden and play grounds, roof gardens, convenient interior arrangement and equipment, including a baby carriage "garage," provide for decent living conditions.

Die Bekämpfung des Hauslärms [The fight against noise in the home], M. MERINGHAUSEN. *Hauswirtschaftliche Jahrbücher* **3,** No. 4 (1930, Oct.) pp. 97–101.

Industrialism and crowded living conditions have made noise a serious health

problem. Noise in the home is of two kinds, that which results from the use of technical appliances, and that which arises merely from people living in the house. Minimizing the former is an engineer's problem, while the latter may be influenced through education. The fight may be directed against the creation and the transmission of noise. Points to consider are efficient construction of houses and equipment, careful installation of machinery, inspection of screws and all parts which tend to loosen, and the use of noise-insulating materials in wheels and other parts of machines, as well as between rooms.

Concrete for small homes, HERBERT LIPPMANN. *Small Home* **10,** No. 11 (1930, Nov.) pp. 12-15, 44.

A discussion of new adaptations of concrete for residence construction, illustrated with photographs.

The iron hand in housekeeping. *Survey* **65,** No. 4 (1930, Nov. 15) p. 215.

Holland, in displacing slums with municipal housing projects, has found some 5 per cent of the families too slovenly to be given new dwellings. These undesirables are "invited" to join a colony for six months training in orderly living, under strict supervision and control, the latter withdrawn as improvement is noted, with graduation into good grade municipal dwellings when warranted.

Gemeinsame Waschanlage für 1,700 Haushaltungen [A common laundry plant for 1,700 households], *V. D. I. Nachrichten* **10,** No. 42 (1930, Oct. 1) p. 1.

A remarkable instance of centralized household activities is found in the new apartment-house group in Berlin-Siemensstadt, which contains quarters for 1,700 households. The laundry plant has up-to-date equipment and is so arranged that the housewives can attend personally to their laundry.

Space heaters, A. M. APMANN. *Am. Gas J.* **133,** No. 4 (1930, Oct.) pp. 83–86.

Available types of gas heaters intended for room heating are described with diagrams and are classified as radiant, reflector, log, and warm air heaters; and gas steam, gas hot water, and gas warm air radiators.

Die Verbreitung elektrischer Grossküchen in Deutschland [The growth of electrified large-scale kitchens in Germany], FR. MÖRTZSCH. *Elektrizitätswirtschaft* **29,** No. 516 (1930, Sept.) pp. 503–504.

The electrification of large hotel, restaurant, and institution kitchens in Germany has made rapid progress in later years, the number of such kitchens in 1929 being 270, or twelve times that in 1925.

Untersuchungen an gasbeheizten Backröhren [Investigations of gas-heated ovens], RUDOLF KLINGEMANN. *Hauswirtschaft in Wissenschaft und Praxis* **3,** No. 3 (1930, Oct.) pp. 1–12.

A detailed report, accompanied by pictures, tables, and charts, of research done under the auspices of the National Association of German Housewives. The results showed that it saves time and heat to turn the gas on full during the heating of the oven and that the temperature is considerably more irregular at the top than on the bottom of the oven. The latter fact necessitates the placing of cakes and cookies on the lower racks to avoid uneven baking; this often prevents heat from reaching the top of the cakes.

Some new methods of heating buildings, H. M. VERNON. *J. Ind. Hyg.* **12,** No. 7 (1930, Sept.) pp. 281–289.

Low temperature systems of heating

have been developing rapidly in Great Britain, the most common being ceiling panels heated by embedded hot water pipes to 100°F., the heat being almost wholly radiant, causing a very even air temperature at all levels. [The floor and other surfaces receiving radiation are 3° warmer than the air.] Ceiling panels are also heated by electric resistance wires to 90°F. and small panels heated to 500°F. have been used. Underfloor heating by means of air ducts is used in a cathedral, and a number of schools have hot water pipes running under the entire floor, which keep it at about 70°F. and cause the rooms to feel 2.5° warmer than rooms heated by convected air of the same cooling power.

Warnung vor "Gassparern" [Warning against "gas savers"], ING. VOLLMER. *Wärmewirtschaftliche Nachrichten*, No. 7 (1930) [Abs. in *Archiv für Hauswirtschaft* No. 5 (1930, Sept.)].

Standards for testing gas ovens are described, as well as the construction of so-called gas savers. Such devices, inserted in regular burners, are held to be not only valueless but actually wasteful of gas.

Some French ceiling fittings of today. *Electrician* **105,** No. 13 (1930, Sept. 26) p. 363.

Photographs and brief descriptions of four unusual and beautiful ceiling lights.

How glass affects your daylighting, H. H. HIGBEE and H. S. BULL. *Proc. Illuminating Eng. Soc.*, Richmond, Va., Oct. 7–10, 1930, pp. 37.

"Results are presented of tests to determine how various kinds of sheet glass in windows affect the total amount of visible light entering a room and that part of it which is usefully delivered to the working plane, as well as the distribution of illumination on that plane; also how the brightness of the glass as viewed from various points in the room is affected by the distribution of brightness in the sky from which it receives light; and how the transmission of light is affected by accumulations of dirt in various situations and by various methods of cleaning."

By-product becomes unbreakable tableware. *Business Week*, No. 60 (1930, Oct. 29) p. 15.

Table and fountain-ware that looks and feels like fine English porcelain, but is practically unbreakable, is made from a moldable powder fused in chromium-plated molds under tremendous heat and pressure and marketed as Beetleware. It is available in 10 bright colors and pastel shades, has a glossy surface which when dulled under heavy wear can be restored by buffing, and is a better insulator than glass or china. Present retail prices for tumblers are 40¢; for cups and saucers, $1.25.

Science creates materials for a new age, Rosanne Amberson. *Forecast* **40,** No. 5 (1930, Nov.) pp. 272–274, 292.

A discussion of the development, characteristics, and utilization of five materials recently brought into wide usage. Aluminum, malleable, plastic, an excellent heat conductor, resistant to water, rust, and acid, is adaptable alike to cooking utensils, shingles, radiators, handwrought decorative grills, lighting fixtures, and furniture. Monel metal, an alloy two-thirds nickel, one-third copper, non-corrosive, with a high silver luster, is excellent for sinks and table tops, and is also successfully used for andirons, decorative fireplace trims, light fixtures, and other metal work. Chromium and stainless steels are also used in these ways. The nickel-chromium

form is heavy and expensive but less corrosive than aluminum or monel, and superior to other materials for exterior use, its high luster withstanding trying weather conditions. It is well adapted to various electrical appliances. Bakelite, strong, tough, chemically inactive, and an excellent insulator, is widely used for articles varying from electrical sockets to radio disks and airplane propellers. It has decorative uses also, comes in many colors, and neither stains nor scratches. Glass, too, has new utilitarian and decorative purposes here described.

Contamination of food cooked or stored in contact with nickel-chromium-iron alloys. A. C. TITUS, H. B. ELKINS, H. G. FINN, L. T. FAIRHALL, C. K. DRINKER. *J. Ind. Hyg.* **12,** No. 8 (1930, Oct.) pp. 306–313.

Four alloys of nickel-chromium-iron were subjected to extensive investigations to determine their fitness for use in contact with food as shown by the weight changes, the character of film formation that occurred when various foods possessing different degrees of acidity are cooked in contact with the metal, and the degree to which traces of the metals enter the food. The results showed very small amount of total dissolved metal, of which iron was the chief metal found, with nickel and chromium in considerably smaller amounts. Contamination was no greater at a hydrogen-ion concentration of 3 than at 6. An average contamination for various foods cooked for one hour in an alloy 15 per cent nickel and 18 per cent chromium was 1.01 mg. of iron, 0.05 mg. chromium, 0.06 mg. nickel for 4 square decimeters of surface in contact with the food. Hence, utensils made of these alloys are hygienically safe for purposes of cooking and for the storage of foods.

Miscellaneous electrical household devices, LILIAN CASSELS. Nat'l Elec. Light Assoc'n Series, *More Power to the Home*, No. 9, pp. 32.

An illustrated account of recent additions to the electrical equipment available for modern homes.

Value of chromium as a finish for plumbing fixtures, N. G. NEAR. *Metal Ind.* **28,** No. 11 (1930, Nov.) p. 518.

The demand for a finish better than nickel, coupled with high pressure salesmanship, has resulted in the use of chromium plated fixtures in 45 per cent of present-day installations without warning purchasers, plumbers, or architects of the shortcomings of the finish or its proper care. Though listed as corrosion resistant, it is readily attacked by chlorine, commonly used to treat drinking water, by contact with or the vapors from urine, and by the vapors absorbed by the dirt film which may accumulate. The plating is commonly too thin, 0.0000075 of an inch whereas specifications for fixtures in government buildings require 0.00002 of an inch; it is quickly worn through by abrasive cleaners; and it may peel off or check because of a faulty process of applying the chromium. A damp rag with a little soap is recommended for cleaning.

Low voltage hazards. *Pub. Safety* **4,** No. 11 (1930, Nov.) pp. 14–15.

A study of 107 cases of fatalities resulting from contact with low voltage current carrying charges of from 110 to 750 volts, occurring in the last two years, shows 31 to have occurred in homes; of these 12 were bathtub fatalities, 7 resulted from contact while on wet basements or earth, and 6 with portable appliances. Defective materials caused one-third of all fatalities; defective installations, 5 to 12 per cent; handling live

parts, 10 to 15 per cent, and other improper practices, 8 per cent. Proper types of extension cords and their careful maintenance, use of weatherproof sockets, proper grounding of portable devices in damp locations, elimination of portable appliances from bathrooms, and the practice of killing circuits at all times before working on them would prevent these accidents.

Metal household equipment offers new opportunities for sheet metal workers. *Sheet Metal Worker* **21,** No. 18 (1930, Sept. 5) pp. 531, 541.

Metal work in home construction has recently gone beyond roofs and furnaces, with the wider use of such white metal alloys as monel metal for sinks, table tops, door kick plates, range hoods, etc. Sheet metal for sinks gives a flexible structural unit, since it can be built to fit into corners, over radiators, into cabinets, etc., making possible a more efficient layout, as well as one rust proof, highly resistant to corrosion and abrasion, not affected by heat, and very strong. Further uses mentioned are for mantlepieces, radiator covers, and fire screens.

Bathtubs for the modern bathroom, JAMES E. FOSTER. *Small Home* **10,** No. 11 (1930, Nov.) pp. 24–26, 42–43.

Descriptions, with illustrations and prices, of the types of tubs, showers, and other fittings now available.

The modern closet combination, J. E. FOSTER. *Small Home* **10,** No. 12 (1930, Dec.) pp. 34–35, 47.

Descriptions with illustrations and approximate costs of three types of flushing systems and eight standard toilet fixtures for home installations.

Do you know what becomes of your time? MAUD WILSON. *Farmer's Wife* **33,** No. 10 (1930, Oct.) pp. 10–11, 45.

A popular discussion of the conclusions drawn from studies of the use of time by Oregon farm homemakers.

Eine Beratungstelle für Inneneinrichtung und Wohnungshygiene [A consultation center for the interior arrangement and hygiene of dwellings]. *Haushalt und Wirtschaft* **5,** No. 36 (1930, Oct. 1).

The Oesterreichische Verband für Wohnungsreform (Austrian Association for Housing Reform), which was founded last year, has established a consultation center combined with a permanent exhibit of efficient household equipment and furnishings, to be located in rooms placed at its disposal by the municipality of Vienna. A committee of prominent architects collaborates with the center, and a testing committee, including nationally known women leaders, selects the applicances for the exhibit.

An international survey of domestic service, MRS. D. M. NORTHCRAFT. *Housecraft* **3,** No. 6 (1930, June) pp. 142–144; No. 7 (1930, July) pp. 183–184.

This summary of the information obtained from the 18 countries replying to a questionnaire sent to 23 countries by the World's Y.W.C.A. asking the status of domestic service, the training offered prospective workers, and the relationships between employers and employees shows that domestic workers occupy a lower social status than workers from similar homes in other occupations in Belgium, Bulgaria, Canada, France, Great Britain, and the United States; while in Sweden and Denmark their status has been improved by giving training. Estonia reports no occupational discrimination; China, the same

occupational rank as factory or handcraft workers. Most countries reported some school instruction in domestic subjects; Denmark, Germany, Great Britain, Holland, Norway, Sweden, and Switzerland all reported substantial training for household service; Germany and Switzerland reported apprenticeship in service; and several countries, including the United States, reported limited provision for training for domestic service. Organizations composed of employers and employees exist in Great Britain, America, and Holland. Consultation between separate associations of housewives and servants and strong trade unions of domestic servants are reported from Germany, Norway, Sweden, and Switzerland. Belgium and Bulgaria reported need of reform in their conditions of domestic service. The excellent work done by the Y. W. C. A. in improving the conditions of domestic service in certain countries is summarized.

Gruppe Hauswirtschaft beim R. K. W. [Home management division of the National Board for Scientific Management.] *R. K. W. Veröffentlichungen* No. 60 (1930) pp. 186–195.

The members of the committees in this division come from rural and urban housewives' associations, trade associations, consumer organizations, various types of schools, public offices; the work has consisted in building up a library and a lecture and information service, organizing and coordinating research (washing tests, investigations of methods for cleaning of floors, study of knives for peeling potatoes, survey of current practice in household lighting), and the publication of a periodical bulletin, *Hauswirtschaft.*

Über Prüfung und Untersuchung von Staubsaugeapparaten [Testing and investigation of vacuum cleaners]. *Technik im Haushalt* **4,** No. 7 (1930, July) p. 5.

In Nos. 9 and 10 of *Elektrotechnik und Maschinenbau* for March, 1930, Dr. Velisek reported tests undertaken by the Municipal Electrical Works of Vienna. The suction was determined and also the effect of dust deposits in the cleaner, a factor which adversely affects the performance but to such different degrees that it appeared to furnish a valuable criterion for judging a cleaner.

Hire purchase of appliances. *Electrician* **105,** No. 13 (1930, Sept. 26) p. 362.

The English hire-purchase plan, a type of deferred payments, is described in the light of its necessity under present-day conditions and the advantages it offers to both the home owner and the producer of electric current.

Food and the nation's leading industry, W. E. NICHOLAY. *Ohio State Univ. Bull.* **35,** No. 3 (1930, Sept. 15) pp. 14–23.

A résumé of the development of the canning industry which shows that attention has centered upon solution of the scientific problems of manufacture, but that education of the consumer for efficient purchasing is the present need of the industry.

Consumer purposes and values, FREDERICK G. BONSER, *Ohio State Univ. Bull.* **35,** No. 3 (1930, Sept. 15) pp. 23–30.

The author recommends that industrial arts teachers study the possibilities of raising consumer purposes to a prominent place in the organization of their work, and that they experiment with its opportunities. Consumer purposes are defined as the values which enable one to select, use, and care for with intelligence,

efficiency, and satisfaction the products of industry, and here limited to the fields of houses and home furnishings, household operating services, household equipment, home recreation services, yard and grounds accessories, and vehicles of transportation.

Der "fahrende Laden" [The travelling store], DR. ELSA F. GASSER. *Neue Hauswirtschaft*, July, 139–140 (1930).

The quick growth of the "Migros" company has recently aroused public interest in Switzerland. Instead of establishing local branches of grocery stores the company has instituted a service with large six-wheeled automobiles fitted up as stores; these cars, 30 in number, have 600 stopping places in Zürich and the suburbs of the city, each automobile following a fixed route, and stopping 5 to 15 minutes in each place. The cars now carry about 90 different articles, all in package form.

"Der billige Gegenstand" [The inexpensive article]. *Die schaffende Frau* **1**, 346 (1930).

The National Museum in Munich has established a regular division called "the inexpensive article" to show that low price is not synonymous with inferior quality. The articles shown range from teacups to cabinets, and any one of them would fit into the most modern and highly cultured home. An attached price tag and label give the name and address of the manufacturer.

H. R. H.
M. C. H.

MISCELLANY

Social Hygiene Publications. The American Social Hygiene Association, 370 Seventh Avenue, New York City, has for free distribution a briefly annotated list of books and pamphlets on social hygiene which includes not only its own publications but also a number of standard books. The leaflet also gives the objects, organization, and services of the Association.

Junior College Journal. The American Association of Junior Colleges and the School of Education of Stanford University are joint sponsors of this monthly, whose first number was issued in October, 1930, and whose aim is to "help to direct, to unify, to coordinate the movement for junior colleges." The editor is Walter Crosby Eells; the magazine is published by the Stanford University Press, Stanford University, California. There are to be nine issues a year, and the price is 35 cents a single copy or $3.00 a year.

Blue Book of Non-Theatrical Films. The seventh edition of "1000 and One," an annual list of educational films, was issued in October by the *Educational Screen*, 5 South Wabash Avenue, Chicago, Illinois. The titles are well classified for reference use, and a brief descriptive annotation is given for each.

Articles from "The Family." A classified list of articles contributed to the magazine *The Family* during the last ten years, has been prepared and will be sent free on request to The Family Welfare Association of America, 130 East 22nd Street, New York City. Many of the titles suggest material of interest to home economists who teach family economics, family relationships, or parental education or who are in social service.

Rural Life in Fiction. Living standards portrayed for rural America in books by Edna Ferber, Willa Cather, Ellen Glasgow, Ruth Suckow, Homer Croy,

and Martha Ostenso, are the subject of an article by Evelyn G. Tough in *Rural America* for October.

Metropolitan Museum Courses. The Metropolitan Museum of Art, New York City, is offering a series of illustrated story hours for boys and girls in the lecture hall on Saturday and Sunday afternoons until May. It is also conducting various study courses for teachers, designers, and homemakers, information regarding which may be obtained from the Museum, 5th Avenue and 82nd Street.

Uses of Cheesecloth. A well-known manufacturer of cheesecloth is basing educational publicity on the two general household uses of cheesecloth—dusting and polishing, for which a coarser, less expensive mesh is suitable; and straining, filtering, and skin cleansing, for which a finer mesh is needed.

Detroit. Prospective visitors to Detroit may be interested in the impressions of that modern industrial community given by Robert L. Duffus under the caption "Detroit: Utopia on Wheels" in *Harpers'* for December.

National Council of Parent Education. The origin, purpose, functions, and membership of the Council are given in a little booklet issued from headquarters at Room 1438, Lincoln Building, 60 East 42nd Street, New York City. The chairman of the governing board is Edna Noble White; the director is Spencer Miller, Jr.; the executive secretary, Flora M. Thurston; and the representative of the American Home Economics Association, Anna E. Richardson.

Porto Rico in the Films. A two-reel film depicting the landscape, life, problems, and prospects of Porto Rico, has been prepared by the government of the Island to familiarize continental Americans with their neighbors and is distributed through the Motion Picture Bureau of the Y. M. C. A., 120 West 41st Street, New York City, and 1111 Center Street, Chicago, Illinois. It may be obtained for no cost except express charges.

Organization of Rural Women in Holland. Some three hundred farm women and representatives of rural training colleges in Holland met in October and took the first steps towards forming a national association. According to *Home and Country*, the movement was initiated by the "old girls" of the colleges who have been in the habit of holding provincial and national conferences along with domestic science teachers and extension lecturers. The Dutch Housewives' Association and the National Council of Women were represented at the October meeting, and Mrs. Alfred Watt, chairman of the Liaison Committee of Rural Women's Organisations, was an especially invited guest.

International Federation of Business and Professional Women. This new federation, launched at Geneva last August, will use the *Independent Woman* as its official publication, having been granted space once every quarter for its news and notices. The next convention will be held in Vienna in July or August, 1931. The president is Lena Madesin Phillips of New York City, also president of the American Federation.

Small Loans for Medical Expenses. A study of such loans, reported by Leon Henderson and published by the Committee on the Costs of Medical Care as Miscellaneous Contributions No. 5, shows that 28 per cent of the persons borrowing

from small loan companies do so because of illness or death, and that the interest rates on such loans vary from 12 to 42 per cent per annum.

Magazines and the White House Conference. In the report of publicity given to the White House Conference on Child Health and Protection by nearly 200 magazines, the JOURNAL OF HOME ECONOMICS ranks second as to the number of issues (nine) in which the Conference was mentioned, the *Red Cross Courier* listing one more. The largest total circulation reached by the notices in any one magazine was that for the *Ladies' Home Journal*, whose three articles went into 7,665,000 copies in all.

Books for Children. The Parents' Council of Philadelphia last autumn invited its members to an exhibit of new books for children at which a librarian was on hand to answer questions. The invitation was on an ingeniously folded, colored mimeographed sheet, which also gave short lists of books for children of various ages.

Classroom Growth Record. The American Child Health Association has issued records to encourage the educational use of weighing and measuring. They are printed in black on buff paper, 23¾ by 19 inches in size, and may be purchased for 3 cents a single copy, $2.50 per 100, and $21 per 1,000 from the Association at 370 Seventh Avenue, New York City.

One-Act Play Tournament. Seventy New Hampshire communities have competed in the state-wide contests conducted for two years by the state extension service. "Finals" were held and prizes awarded during Farmers' and Homemakers' Week at the University. According to *Farm Population and Rural Life Activities*, the Recreation Association of America is also cooperating in helping "coaches."

Clothing Prices. A complete outfit of women's clothing of medium grade was said to cost 28 per cent less in the late autumn of 1930 than a year earlier, while a similar comparison of men's clothing costs showed a decline of 13 per cent. The figures are based on a survey made by *Women's Wear Daily* and quoted in *Domestic Commerce* for December 10.

Garment Sizes. In summarizing responses to a questionnaire on the merchandising of "Stoutwear" dresses and coats, the November *Bulletin* of the National Retail Dry Goods Association finds that "until size terminology becomes more standardized, until manufacturers and retailers get together and agree upon the meaning of quarter sizes, half sizes, etc., the stout customer will experience difficulty in finding dresses that will fit, and will continue to pay in the average store a higher than necessary alteration cost. . . . Agreement on size specifications is the first step in building up and maintaining a complete size range."

Sewing Machines. "The Servant in the House" is the title given to a brief, non-technical history of the sewing machine by Frederick L. Lewton, curator of textiles in the United States National Museum. It originally appeared in the Smithsonian Reports for 1929 and is now available as a separate, designated Publication 3056 of the Smithsonian Institution Washington, D. C.

Rayon and Paper Making. The increasing use of rayon is said to be presenting a serious problem to paper manufacturers who use rag stock. Tests made at the Bureau of Standards, as reported

in the daily press, show that rayon lessens the strength and pliability of paper. More and more rayon is, however, being used in all sorts of textiles and finds its way into the rag-waste on which paper manufacturers depend.

New Packaging as a Stimulus to Sales. Cellophane and other new packing materials, together with colored fiber containers, the development of packaging machinery, and the need for pushing sales have brought about rapid changes in the packages in which many goods are marketed. According to *The Business Week*, manufacturers now vary the number of units in a standard package according to the speed with which the commodity moves from the retailer's stock.

Potato Sizes. The most desirable sizes for potatoes in eastern retail markets was between 2¼ and 3 inches in diameter, according to a survey recently made by the United States Bureau of Agricultural Economics. Hotels and restaurants are said to prefer them slightly larger, especially for use as French fried and "shoestring" potatoes; also for mashed potatoes, where the large tubers cause less waste.

Trucks and Produce Distribution. The increasing use of trucks for transportation of perishable fruits and vegetables is strikingly shown by 1929 figures quoted in *The Business Week* for December 3. In Los Angeles motor trucks brought in the equivalent of 21,405 rail carloads, as against 17,044 brought in by railroads. The ratio of truck to railroad deliveries was increasing in practically all of the 66 principal markets of the country and had reached 29.8 per cent in Newark, New Jersey, and 21.4 per cent in Denver.

Survey of Cooking Ranges. The Division of Electrical Equipment in the Department of Commerce has made a survey of the household cooking appliances in the stocks on hand among dealers throughout the country. As reported in the *U. S. Daily* for December 2, the findings indicate that about 3,000,000 ranges of all types are sold in a year. In 1929, different types of ranges were sold in about the following quantities: gas ranges, 1,130,000; oil, 900,000; coal and wood, 900,000; electric, 158,000; tank gas, 25,000. It was estimated that because of favorable rate schedules, 8,500,000 families might be considered "prospects" for electric ranges.

History of Agriculture. "A Bibliography of the History of Agriculture in the United States," prepared by Everett E. Edwards of the Bureau of Agricultural Economics, includes nearly 300 pages of classified, briefly annotated references to publications, most of them dated between 1900 and 1929. It is issued as United States Department of Agriculture Miscellaneous Publication No. 84 and may be purchased from the Superintendent of Documents, Washington, D. C., at 45 cents a copy.

The Language of Scientists. What scientists do and do not do to language was the subject of a delightful paper read by Rev. George W. Lay before the North Carolina Academy of Science, and printed in *Science* for December 5, 1930.

News Notes

GENERAL

American Standards Association. At the annual meeting on December 11, Bancroft Gherardi, vice-president of the American Telephone and Telegraph Company, was elected president in the place of William J. Serrill. Member organizations in the Association now number 45, including 9 technical societies (among them the American Home Economics Association), 29 trade associations, and 7 departments of the federal government.

4-H Club Scholarships. To celebrate the centenary of the introduction of the first successful grain reaper by Cyrus Hall McCormick in 1831, the International Harvester Company will award 100 scholarships of $500 each to members of 4-H Clubs for outstanding work done in 1931.

National Committee for Mental Hygiene. At the twenty-first anniversary meeting held November 13 in New York City, Dr. Frankwood E. Williams resigned after fourteen years of service as general director. Dr. C. M. Hincks, who was appointed to succeed him, is also medical director of the Canadian National Committee on Mental Hygiene and vice-president of the International Committee.

Nutrition and Drought Relief. To lessen the danger of inadequate diet in drought stricken areas, the National Drought Relief Committee organized a subcommittee to prepare a list of desirable foods available at low cost in the South. The committee, which includes representatives of the Bureau of Home Economics and the Office of Cooperative Extension Work in the United States Department of Agriculture, of the United States Public Health Service, and of the Nutrition Service of the American Red Cross, has collected information for distribution among extension and other welfare workers in the special areas.

Kellogg Child Welfare Foundation. The establishment of the W. K. Kellogg Child Welfare Foundation in Battle Creek, Michigan, was announced in December. A fund of $1,000,000 is reported in *School and Society* as already available. The seventeen aims listed in the articles of incorporation point to work with handicapped or underprivileged children. The medical director is to be Dr. J. Stuart Pritchard, for many years on the staff of the Battle Creek Sanatorium.

Women's Institutes, England. The annual meeting of the National Federation of Women's Institutes is called for May 19 and 20. It is to be held in London in the Royal Albert Hall, where, for the first time in several years, they will have some room for visitors in addition to delegates. In December the total number of institutes was 4,622.

International Federation of Home and School. Buenos Aires, Levin in New Zealand, and Pretoria in South Africa are among places in which parents have recently organized to aid in the development of the schools or of the parents themselves.

English Conference of Educational Associations. The programs of the meetings on December 31 to January 7 at

University College, London, include several sessions of member organizations whose interests appear akin to those of home economics: Institute of Handicraft Teachers, Medical Officers of Schools Association, Nursery School Association, Child Study Society.

NEBRASKA

University of Nebraska. Margaret Fedde, chairman of the home economics department, attended the White House Conference, the conference of the National Council of Parent Education, and the meeting of the Association of Land-Grant Colleges in Washington in November. As chairman of the committee on orientation courses at the Land-Grant meeting, she gave a report of the organization of such a course for home economics freshmen.

The home economics department is for the second year sending out to Nebraska high schools a poster exhibit of work done by students in each division of the department. Bess Steele, head of the design division, is in charge of the exhibit, which includes 20 cards, 20 x 26 inches, bearing photographs and other illustrative material. Last year 22 high schools received the exhibit.

"What a Girl Can Do," published by the University and discussing opportunities in the field of home economics, was sent to all girls graduating from Nebraska high schools last year.

A faculty committee is preparing a "Who's Who" of the graduates and staff members of the home economics department, which will be sent to all alumnæ.

The girls' meat judging team of the University won first place in the home economics intercollegiate contest held November 17 at the American Royal Livestock show at Kansas City, Missouri. On the team were Anne Brackett, Eva Buel, Christine Carlson, and Grace Lee. At the International Livestock Exposition at Chicago the team ranked second, with Eva Buel the high individual scorer.

The art collection acquired for the department by Bess Steele and Grace Morton on their trip to Europe last summer, was exhibited at a faculty tea this fall. Miss Steele is making etchings from photographs which she took while abroad.

Bernice Elwell, director of the agricultural college cafeteria, spent six weeks studying at Columbia University last summer.

Ruth O'Brien, '14, of the textiles and clothing division of the United States Bureau of Home Economics, visited the home economics department in October for a conference on research problems in textiles and clothing.

Mrs. Clara Gebhard Snyder, '26, now with the United States Egg Society, Chicago, visited the department in October.

Dr. H. C. Sherman of Columbia University spoke before several groups at the University in November.

At a girls' convocation at the agricultural college on November 4, Catherine Cleveland of the Cotton-Textile Institute directed a fashion show of new and unusual cotton fabrics and their uses. Home economics students were the models who wore the costumes.

The new director of the university cafeteria this year is Mary Shipman, a graduate of the University of Minnesota. She succeeds Betty Bosserman Barnes, '26, who became Mrs. Dorsey Barnes last August and now lives in Rapid City, South Dakota.

Mildred Larson, who held a fellowship in foods and nutrition last year, is teaching foods and acting as resident adviser in one of the home management houses at the University of Minnesota.

Mary Guthrie, who held a fellowship in textiles and clothing last year, taught at the State Teachers College at Kearney last summer and is now teaching in the Lincoln schools.

Georgia Wilcox, a senior in home economics and president of the Nebraska University chapter of Omicron Nu, was elected national president of student clubs at the meeting of the American Home Economics Association at Denver last summer. Her home is at Scotts Bluff, Iowa.

This year Zeta Chapter of Omicron Nu has nine members. Its newest project is placing on the bulletin board each week, for the benefit of the home economics students, a picture and a short history of some particularly outstanding home economist. The chapter is also bringing the history of the home economics department up to date and plans to keep it so.

NEW HAMPSHIRE

New Hampshire Home Economics Association. At the meeting held in Concord on October 17 the following officers were elected: president, Daisy Deane Williamson, Durham; vice-president, Elizabeth Hendry; secretary, Evelyn Burnham, Laconia; treasurer, Lillian Hartwell; councilor, Alice Fitch.

The main feature of the program was the talk on student club organization by Katharine Baker, teacher of home economics in Medford, Massachusetts. Fifty dollars was voted from the state treasury to start a traveling library for the use of members, and Irma G. Bowen, assistant professor of home economics at the University of New Hampshire, was chosen as chairman of the committee. The books are to be placed in the Hamilton Smith Library at Durham and marked as a gift of the New Hampshire Home Economics Association. In return, the library staff will take care of the cataloging and the mechanics of lending the books. A list of association members of good standing will be furnished the librarian.

The principal aim of the state association this year is to increase membership among institutional managers, dietitians, matrons of dormitories, interested homemakers, teachers, and extension workers.

University of New Hampshire. Mrs. Helen F. McLaughlin, head of the home economics department, attended the White House Conference.

The University is building a new home management house which will be ready for occupancy in March. It is of the Cape Cod style of architecture and will accommodate eight students, a supervisor, and an instructor.

State Department of Education. Louise Norton, University of New Hampshire '25, who has had teaching experience at Keene Normal School and in Cleveland, Ohio, has assumed her duties as the first state supervisor of home economics in New Hampshire.

Extension Service. Ann Beggs, home management specialist, has been conducting a kitchen improvement campaign, and 178 women in the state are reported to be improving their kitchens under her guidance.

NEW YORK

New York State School of Agriculture, Morrisville. The home economics department has introduced itinerant home economics teaching for nearby schools not large enough to warrant full-time departments. Mrs. Ruth Tanner, a Cornell graduate, has five schools, and Margaret Nielsen, a graduate of William Smith College, has four.

Morrisville State School. The home economics department has an enroll-

ment of 23 this fall, 15 of whom are new students. Eleven of the new students are high school graduates, which is an indication that the State School is functioning for girls who wish to train for a gainful occupation without the expense and time of a college course. Courses are being given in food and clothing merchandizing. Several of the girls acted as sales girls in stores in nearby cities for the Christmas trade.

Binghamton Home Economics Association. At the regular monthly meeting in November, Madelyn Hauten, city probation officer, was guest speaker. She emphasized the value of home economics training for the girls.

Columbia University. Wilhemina Spohr, assistant professor of household arts at Teachers College, sails in January for a six months' trip around the world.

City School Systems. *Binghamton.* Clara Slawson is acting as supervisor of homemaking in Binghamton this year. For the past few years she has been on the faculty of the continuation school.

The homemaking department of the new West Junior High School, opened in September, includes an apartment consisting of a reception hall, living room, dining room, bed room, and bath, two clothing laboratories, and two foods laboratories, all fully equipped. The department is under the direction of Merna Henry and Katherine Fassett.

Rochester. The eleventh-year pupils in the cafeteria and tea-room course at Monroe Junior-Senior High School are cooperating with the demonstration nursery school, which is one of the experiments under the Laura Spelman Child Development and Parental Education work. This project provides a real situation, demands the assumption of responsibility by those in charge, teaches the actual preparation and serving of foods to pre-school children, and gives the girls the opportunity to observe some of the methods used by trained workers in dealing with behavior problems.

NORTH DAKOTA

North Dakota Home Economics Association. The annual meeting was held in Fargo October 30 and 31 at the time of the North Dakota Education Association meeting. Mrs. Chrystine Carter of the National Wall Paper Association and Miss Catherine Cleveland of the Cotton-Textile Institute were out-of-state speakers. The officers of the Association elected for the year are: president, Pauline Reynolds, extension division, State College; vice-president, Eula Underbrink; secretary, Marie Webster, Carrington; treasurer, Esther Latzke.

Department of Vocational Education. Two itinerant teachers of adult homemaking are employed this year. Ella Johnson, who conducted classes in four centers last year, has been made a full-time teacher, and Marjorie Thompson of the University of Nebraska will teach for six months. Eight new centers have been formed, making twelve communities now served by an adult teacher for at least six weeks and two served for eight weeks.

There are 32 schools on the vocational home economics list for 1930–31; two are to employ the teacher for ten months, the extra month being for home project work with rural girls.

Adult classes in homemaking were conducted for eight weeks in Casselton, one of the teacher-training centers of the State College, giving the student-teacher the opportunity of observing adult classes as well as day classes during the two weeks spent at the center.

State College. Alba Bales, dean of home economics, attended the Land-

Grant College meeting and White House Conference in Washington in November.

Elvira Smith, foods and nutrition department, attended the American Dietetics Association meeting in Toronto in September.

Extension Division. Astrid Christianson has been appointed district home agent of Wells and Benson Counties, with headquarters ar Fessenden. Other new appointments are: Mae Sontag, Cass County, taking the place of Catherine Lambert Boehm; Frances Ross, Williams County, succeeding Kathleen Austin, who is now field representative for the American Red Cross; Stella House, Ramsey County, with headquarters at Devil's Lake.

The increase in number of homemakers' clubs has been greater this year than any previous year—an increase of about thirty per cent, making a total of 396 clubs with 7,000 women enrolled. Records show that an equal number of women not members of homemakers' clubs, have been helped indirectly.

OHIO

Ohio Home Economics Association. *Southwestern Section.* The annual meeting was presided over by the chairman, Margaret Connor of Miami. Mr. Ames of the Rike-Kumler Company, Dayton, discussed the common problems of the merchant and the consumer. Miss Lockhart of the National Dairy Council talked on ways to include health education in home economics classes. Tea was served by the city teachers group. Rosamond Cook was elected chairman of the section for next year, and Mary Smith, secretary.

Cleveland. *Cleveland Home Economics Association.* The Association was the guest of the Electrical League at their new headquarters in the Builders' Exchange Building, on November 15. Following the program, a "get acquainted afternoon" was arranged by the entertainment committee under the guidance of Edna Colonius. On December 9, I. T. Frary of the Art Museum spoke to the Association on "Early Ohio Homes."

Public Schools. Adelaide Laura Van Duzer, supervisor of home economics, was a delegate to the White House Conference.

Ellen Dabney, director of home economics in Seattle, Washington, was a guest of the public schools in November.

Elsie Maxwell of the University of Akron was the leader of the home economics section meeting at the Northeastern Ohio Teachers' Association on October 31. The speakers were Dorotha Finch Marlow of Shaker Heights High School, Elizabeth Dyer of the University of Cincinnati, and Velma Phillips of Ohio University, Athens.

Lakeside Hospital. A number of home economics graduates who have recently completed student dietitian training are: Elizabeth Benbow and Margaret Durkee, now at Peoples' Hospital, Akron; Edna Edwards, now at Alliance Hospital, Alliance; Lillian Hunter, now at St. Thomas Hospital, Akron; Margaret Sage now at Glenville Hospital, Cleveland; and Gladys Norton, now spending a few months at home.

Cincinnati. *Cincinnati Home Economics Association.* The Association is basing its program for the year on the study that has grown out of the regional conference on home economics held in Cincinnati last March on call of Commissioner Cooper. The work got under way in October at a meeting of supervisors, teachers, deans, and representatives of various interested organizations, such as the Ohio Parent-Teachers' Association, and the Ohio Federation of Women's Clubs. The special subject

assigned to the home economics association, of which Katherine Gerstenberger is president, is criteria for judging home economics teaching from the teacher's point of view; this is being considered by a special committee of which Edna Moorman is chairman.

University of Cincinnati. Bertha Hays' class in meal planning conducted for two days a successful tea room in the department dining room, serving lunches that proved very popular with students from other schools. The girls in charge felt that they had gained splendid experience in management, buying, and large quantity cookery.

Afton Smith has been made vice-chairman of the committee on parental education of the Ohio Parent-Teachers' Association.

Elizabeth Dyer, Afton Smith, and Mrs. Ransohoff attended the White House Conference in Washington in November.

The membership of the Household Administration Club of the University is greatly increased this year. It opened its season with a buffet luncheon in honor of new members. At the November meeting the Club enjoyed a Chinese dinner, followed by an interesting lecture on the Orient, illustrated with moving pictures. The Club plans to give a benefit bridge, the proceeds from which will be used for the May Day Luncheon.

Columbus Public Schools. Elsie Friebel is chairman of Central Ohio Home Economics Teachers' Division, and Ruth Davis is president of the Columbus group. Alice Bradley of the Boston Cooking School discussed "Art in Cookery" at the November meeting of the Division.

Miami University, Oxford. The foods and nutrition class in McGuffey High School (the practice school of the University) is carrying on a nutrition experiment with white rats. A class in camp cookery for boys has been organized in home economics; eleven boys are enrolled.

At a meeting of the home economics teachers of the centralized schools at Sidney (near Oxford), Eve Montgomery emphasized the need of demonstrations in teaching and illustrated the point by a demonstration on cheese. Alice Swisher assisted this group of teachers in working out a course of study for junior and senior high schools.

Miss Swisher attended the teacher-training conference held at Ohio Wesleyan November 21 and 22. The program was on supervision, and Dr. Kyte of the University of Michigan was the principal speaker.

Miss Montgomery has been giving talks on table etiquette at the various dormitories on the campus.

The girls in the home management house at the University have earned money for a radio by selling sandwiches and taking orders for food for parties.

Ohio State University. Dean Margaret Justin of Kansas State Agricultural College spoke on November 25 on "Changing Trends in Home Economics" at a meeting arranged by Omega chapter of Omicron Nu.

Home Economics Extension. Minnie Price, state home demonstration leader, attended the White House Conference and the Land-Grant College meeting in Washington.

Wanda Przyluska, health specialist, attended the American Public Health Association meeting in Forth Worth, Texas, in November.

Mary Stebbins, health specialist at the University of Missouri, was a November visitor.

Bernice Bailey Henderson, home demonstration agent in Lucas County, has resigned to make her own home in Detroit. Ruth Prewitt, former Red Cross nutritionist, has succeeded her.

OKLAHOMA

Agricultural and Mechanical College. Virginia Messenger and Fern Hotton of the nursery school staff cooperated with local merchants in a display of Christmas toys for children of different ages. Printed sheets offering suggestions for suitable toys were given to interested visitors.

Dean Nora A. Talbot and Dr. Callie Mae Coons attended the White House Conference at Washington in November. Miss Talbot also attended the meetings of the Land-Grant College Association and the National Council of Parent Education.

The household arts department had as its guests recently Alice B. Athey of the McCall Pattern Company and Catherine Cleveland of the Cotton-Textile Institute.

The Home Economics Club has planned a series of travel talks for the year. Sara Murray, head of the household arts department, spoke on her travels through England and Holland. Irma Currin, a visitor on the campus, displayed many interesting textile fabrics and jewelry in connection with her talk on life in Porto Rico.

A committee on rural electrification in the state of Oklahoma made an inspection trip in October to see the electrified farms in the state. On this committee are representatives from the Oklahoma Agricultural and Mechanical College, as well as members of gas and electrical companies, public service companies, and farmers. The representatives from the School of Home Economics are Dean Talbot and Dr. Edith MacArthur, head of the department of household science.

A short course on problems connected with electrical appliances for the home, under the joint supervision of the southwestern division of the National Electric Light Association and the School of Home Economics at the College, has been planned for March. It is primarily for women in home service and research work with manufacturers of electrical equipment. This is the third course of this kind to be given at this institution.

Dr. H. C. Sherman visited the College on October 30, and spoke before students and faculty.

Oklahoma College for Women. Members of the home economics faculty who spent at least part of the summer in study are: Julia McIntyre, at the University of California; Hazel Frost at the University of Iowa; Laurel Davis, at the University of Michigan. Anna K. Banks, head of the department, studied at the University of Iowa on a fellowship from the National Council of Parent Education.

Verletta Hearn, '30, is in charge of the home management cottage which was opened in September.

Twenty-four outstanding Oklahoma women, selected by *The Daily Oklahoman*, were guests of the College on October 15. Luncheon was served by the department of home economics.

University of Oklahoma. Dr. Helen B. Burton, head of the department of home economics, attended the conference of the National Council of Parent Education and the White House Conference in Washington in November.

Lila M. Welch, associate professor of home economics in charge of teacher training, attended the American Vocational Association meetings in Milwaukee in December.

Laura A. Miller, assistant professor of home economics, and Helen H. Hamill, instructor in home economics, were on the program at the short course held at the Murray State School of Agriculture on December 13.

Oekonomia, the local honorary home

economics organization, had a most interesting and well-attended Thanksgiving program at the practice home. This club sent Christmas boxes to poor families as they have in the past.

Initiates into Omicron Nu are Gertrude Flanagan, Hazel Wile, Alta Mae Williams, and Florence Reinberg.

The home economics faculty are giving informal teas on the third Wednesday of each month for all home economics students.

OREGON

Oregon State Agricultural College. Dean Ava B. Milam of the school of home economics represented Oregon at the three national meetings held in Washington, D. C., in November.

Correspondence courses in household management and child development are offered this year for the first time. The home management course is under the supervision of Professor A. Grace Johnson, head of the household administration department, and deals with the management of household operations and finances and family and community relationships. The child development course is under the direction of Mrs. Sara W. Prentiss, professor of child development and parent education, and Mrs. Vera Brandon, instructor in household administration; it includes the growth and development of the young child and emphasizes the influence of environment on personality. Each course includes 16 lesssons, entitles to three college credits on completion, and may be substituted for similar courses for students in residence A correspondence course in clothing selection is to be offered in 1931–32.

Home economics extension appointments made since July, 1930, include three home demonstration agents: Thelma Gaylord, Clackamas County; Mrs. Sarah Vineyard Case, Columbia County; and Frances Clinton, agent-at-large for the state. Mrs. Zelta Feike Rodenwold is Oregon's first home management specialist. Forena Jenks is assistant in home management and home economics radio service.

Elsie Jacobson, formerly instructor in clothing, textiles, and related arts, was married last summer to David Weaver, a teacher at New York University, and lives at 431 West 121st Street, New York City.

A short course in household equipment was held January 29 to 31 to disseminate technical and non-technical information regarding the selection and operation of household appliances. The program was planned for home service representatives, home economists in the teaching profession, homemakers, and students. The regular staff was assisted by Eloise Davison of the National Electric Light Association, and Genevieve Callahan, editor of *Sunset Magazine*.

To meet the needs of homemakers, mothers, teachers, social workers, and others the extension service offers five home economics courses in Portland, one on "Nutrition of Children," given by Professor Jessamine C. Williams; one on "Food Marketing," by Willetta Moore; one on "Behavior Problems of Young Children" and one on "Behavior Problems of the Adolescent," by Professor Sara Watt Prentiss; and one on "Clothing Design," by Professor Mildred Chamberlain.

RHODE ISLAND

Pawtucket. Alice Currier, supervisor of home economics in the city school system, gave the home economics teachers an interesting resumé of the White House Conference, to which she was a delegate. The talk and the discussion which followed her report left the teach-

ers resolved to try to put the recommendations of the Conference into practical effect.

SOUTH DAKOTA

South Dakota Home Economics Association. An association news-letter is being published this year for the first time. The first number appeared in January; a second will be sent out in the late spring. Miss Medra Hall of Sioux Falls is editor.

The Association is emphasizing student club work this year and has appointed a sponsor to keep in touch with and inspire club activities.

University of South Dakota. A successful two-weeks' nursery school was maintained in December. Mary Margaret Shaw, professor of home economics and a former Merrill-Palmer student, was assisted by Winifred Edwards, itinerant teacher of home economics adult education; students in the department assisted and observed in the school.

Miss Shaw attended the conference on social and economic conditions of the modern family called by Commissioner Cooper at Ames, Iowa, in November.

A fashion show for men, arranged by the department during January, attracted considerable interest from the members of the sterner sex on the campus.

A new electric range in the home economics cottage makes it possible for each of the girls in the Smith-Hughes course to have experience with gas, kerosene, and electric stoves.

Adult Education. An eight-week unit in adult education is in progress at Aberdeen. An eight-week unit at Sioux Falls and a three-week unit at Vermillion have already been completed. Winifred Edwards, who has her master's degree from Kansas State Agricultural College, is the itinerant teacher.

VERMONT

Vermont Home Economics Association. The first meeting of the year was held in conjunction with the State Teachers Convention at Rutland on October 10. After a short business session, Grace Langdon, Columbia University, spoke on "Teaching a Unit Course in Child Development to High School Girls."

Public Schools. The high school at Springfield has a new home economics laboratory equipped on the unit-kitchen plan. Several other schools in the state have recently had new laboratories, some of them similarly equipped.

Home economics teachers in the state who studied during the summer were: Dorothy Smith, Montepelier, and Hazel Haylett, Jeffersonville, at Columbia; Mrs. Violet Lyman, Hinesburg, Loretta Malone, West Rutland, Mary Pillsbury, Bellows Falls, and Miss Boakes, Newbury, at the University of Vermont.

University of Vermont. The Home Economics Club met in October to formulate plans for the year's work. There was a large attendance at the November meeting when a demonstration was given on the use of the new electric and gas ranges recently installed in the home economics laboratory. Miss Terrill, who attended the Land-Grant College meeting and the White House Conference in Washington, gave an enthusiastic report of the meetings to the Omicron Nu members at their December meeting.

Extension Service. Lillian Andrews of Framingham Normal has recently been appointed as nutrition and household management specialist.

WASHINGTON

University of Washington. Jessie O'Keefe, formerly on the staff at the

University of Montana, is a new instructor in the department.

Alice Reid, '28, who has been designer for a clothing factory, holds the Bon Marché Fellowship in textile testing for 1930–31.

Elizabeth A. Rivers, on leave for two quarters, has returned after an extensive Mediterranean tour.

Grace G. Denny, associate professor, was a guest teacher at the University of Chicago during the summer session.

State College of Washington. Recent appointments to the home economics faculty include: Stella May Heywood, instructor in foods and supervisor of the home management house; Vera Askren, Myra Newton, and Beverly Richardson, assistant dietitians in girls' dormitories.

Myra Potter, another recent appointee, will divide her time between teaching and research in nutrition. Her research will be in the vitamin C content of Washington apples, and the vitamin A content of frozen cherries.

Leila Hunt is doing cooperative research with the experiment station chemist, Dr. J. L. St. John, on the thick and thin portion of the white of eggs in angel-food cake, a subject whose practical value lies in lack of understanding as to the various factors which influence the effect of eggs in home cooking.

Vivian Garrett has resigned to accept a position at Hiram College, Hiram, Ohio; and Irene Stanton, to become dietitian and part-time teacher at the University of Wyoming.

Dean Florence Harrison was elected chairman of the home economics section of the Association of Land-Grant Colleges at the annual meeting in Washington, D. C.

Extension Service. Lois Holderbaum has been appointed as clothing specialist. Elmina White, who has spent the last two years in home economics work in Hawaii, has returned as assistant director in home economics.

WEST VIRGINIA

West Virginia Home Economics Association. At the annual meeting at Clarksburg, November 14, the morning session was given over to business. One hundred and fifty teachers of home economics attended the annual luncheon at the Waldo Hotel. At the afternoon session Mrs. Iris Prouty O'Leary, state supervisor of home economics of New Jersey, spoke on publicity for a home economics program, and Mrs. Rowena Schmidt Carpenter of the United States Bureau of Home Economics, on child development.

Mrs. Helen Sterrett Jones, acting head of the department of home economics at West Virginia University, was elected president and Katherine Kearney, supervisor of home economics in the city of Charleston, councillor.

Vocational Home Economics. The homemaking section of the division of vocational education of the State Education Association was attended by a large group of teachers. The speakers on the program, which was arranged by the chairman, Madge Williams of the Shinnston High School, included: Mrs. Iris Prouty O'Leary, New Jersey; Iva I. Sell, West Virginia University; Wilda Hoard, Kingwood; and Virginia Ruth Brown, Upshur County High School.

Genevieve Yeager of the Athens High School, represented the teachers of homemaking education at the meeting of the American Vocational Association at Milwaukee.

The theme for the convention of the West Virginia Congress of Parents and Teachers at Fairmont, October 30 to November 1, was vocational education. The home economics phases of the subject were presented by Dr. Louise Stanley,

United States Bureau of Home Economics; Lena M. Charter, state supervisor of home economics; and Elizabeth Eckhardt, department of agricultural extension, West Virginia University.

Student Clubs. A state meeting was held at Clarksburg, November 12 to 14, under the direction of a committee headed by Ruth Bartlett of Bluefield High School. The cash prize offered by the West Virginia Home Economics Association for the best student club program for the school year 1929–30, was awarded to the Cairo High School.

The home economics clubs held a series of very interesting meetings in connection with the West Virginia Educational Association in Clarksburg on November 13 to 15. Two club girls, Ruth Shriver and Ruth Reed, under the direction of Louise Boggess led the dramatization of a "Typical Club Meeting." Ruth Reed was elected president of student clubs for the ensuing year.

West Virginia University. Rachel H. Colwell, head of the home economics department, who is on leave of absence this year, paid the department a visit during November and attended the state educational meeting in Clarksburg. During Miss Colwell's absence, Mrs. Helen Sterrett Jones is acting head of the department. Mrs. Jones attended the meeting of the Land-Grant College Association in Washington.

Jean Richmond of the department of home economics education has been studying in London this fall and plans to continue work for her doctorate at the University of Minnesota after the holidays. During her absence, Iva Sell, formerly on the staff of the University of Minnesota, has charge of her work.

Ruth D. Noer, dean of women and assistant professor of home economics, spoke at a dean of women's meeting during the West Virginia Education Association meeting in Clarksburg.

Nell Nesbitt has returned after leave of absence for study at the University of Chicago.

New members in the department are: Helen Curtis, resident instructor in home management; Mayme Waddell, in charge of the cafeteria; and Zola Shirey, dietitian at Woman's Hall.

Phi Upsilon Omicron held initiation in November for Mrs. Dorothy Atwood Collette, Marjorie Swisher, Dora Hamstead, seniors, and Helen Tucker, junior. The chapter has recently given two sets of pewter salt and pepper shakers and pewter flower bowl to the home management house.

The University 4-H Club group had charge this year of the Mountain State Home Industries' sale held annually before Christmas. It offered products of the farm homes such as jams and jellies, hand-loom products, fruit cakes, willow split baskets, hooked rugs, and pieced quilts, all bearing the Mountain State Home Industries label and the stamp of approval of the University extension division.

In the new University High School, the corner stone for which was laid on November 18, the home economics quarters will include a cafeteria, unit kitchens for foods work, a clothing laboratory, and a room for home activities and parties.

Home Economics Club. This year's program for monthly meetings of the University Home Economics Club is planned around various "ships"—friendship, leadership, acquaintanceship, citizenship, fellowship, and workmanship. At the Christmas party, sewing was done for the Red Cross.

WISCONSIN

Wisconsin Home Economics Association. The outstanding features of the October meeting, held with the Wisconsin Educational Association, were

the four round tables on clothing and textiles, family relationships, foods and nutrition, housing and related art. The attendance was about five hundred.

The clothing and textile program dealt with the teachers' problems. Ruth O'Brien of the United States Bureau of Home Economics gave an illustrated talk and four high school instructors followed with a demonstration of the use of the silhouette camera in teaching the girl the appearance of her own figure; a figurine was cut on lines of the student's own silhouette and on this a costume was actually created, thus giving the girl more than a two dimensional idea of how her completed dress would look. The teachers stayed to examine the apparatus and talk over the exhibition for more than an hour after the meeting closed. In the foods and nutrition section, Dr. Dorothy Reed Mendenhall presented the latest information on the subject of anemia and its dietary treatment.

In housing and related art, Eloise Davison of the National Electric Light Association talked on the use of electricity in the home, using a miniature stage device which showed how different degrees of illumination and different colors in the bulbs affected the color used in interior decoration—a device that could easily be prepared for use in any home economics department.

University of Wisconsin. The home economics club of the home economics department, named Euthenics in honor of Mrs. Richards, is this year studying opportunities in home economics other than teaching, and foreign home life, customs, and standards. At the second meeting Professor Bess Tyrrell gave a vivid picture of the work of a professional stylist. Professor Hillstrom gave an illustrated lecture and exhibit of the textiles she brought back from her recent trip around the world. The Euthenics Club also sponsored the agricultural home economics party, the proceeds from which are used to provide a freshman scholarship for a 4-H Club girl. Six such competitive scholarships have been provided this year by the Euthenics Club, Phi Upsilon Omicron, and friends. There are 31 4-H Club girls enrolled in home economics.

Elizabeth McCoy, assistant professor of agricultural bacteriology, studied abroad last year, as the holder of a fellowship from the National Research Council. She spent most of her time at the Rothamsted Experiment Station, Harpenden, England, the oldest such station in the world, but was for four months at the Botanical Institute at Prague.

Our Contributors

L. THOMAS HOPKINS, a contributor to the JOURNAL for May, 1930, combines teaching education at Teachers College, Columbia University, with work as curriculum specialist at the Lincoln School.

R. M. CONNER has been director of gas testing laboratories almost continuously since his graduation from Oregon State Agricultural College. Managing director of the Cleveland laboratory of the American Gas Association since 1925, he is now also supervisor of a new branch laboratory in Los Angeles.

LOLA M. CREMEANS here tells of another aspect of Eskimo life about which she has learned through Mr. William Geist, as described in the JOURNAL for April, 1930.

HELEN C. GOODSPEED is vice-chairman of the department of home economics teachers and supervisors in the National Education Association. She holds the bachelor's degree from Columbia and that of master of arts from the University of Wisconsin, and has had wide experience in teaching, teacher-training, and supervision. EVERICE PARSONS studied at the Merrill-Palmer School and at Columbia University after graduation from Cornell, and is now chairman of homemaking in Fordson public schools, Dearborn, Michigan. ADA KENNEDY was graduated from State Teachers College and the State Agricultural College of Kansas before going to California, where she is now director of home economics in the Pasadena city schools. She calls attention to the fact that the John Muir High School (described in her paper) is the only four-year one in the Pasadena system which is otherwise reorganized on the 6–4–4 plan.

EMILY CURRAN, a Simmons graduate with a master's degree from Teachers College, Columbia University, spent a year as educational interne at Lincoln School and has been for three years supervisor of health teaching in public schools of Long Island.

GEORGE P. LARRICK gained his scholastic training at Wittenberg College and Ohio State University and has since been with the United States Food and Drug Administion. His present duties as senior inspector include planning and coordinating inspection work and methods in connection with the enforcement of the federal food and drugs act.

MAUD E. HAYES was granted both the bachelor's and the master's degree by Teachers College, Columbia University, was for some years head of the home economics department at the Connecticut Agricultural College, and has just completed a decade of successful work at Long Beach.

EDNA C. ROOP is a graduate of the University of Indiana and an experienced teacher of clothing in high schools of Muncie and South Bend.

MARION D. SWEETMAN was granted the bachelor's and master's degrees by Iowa State College, and that of doctor of philosophy by the University of Minnesota. Since 1927 she has been at the University of Maine, dividing her time between teaching foods and nutrition and carrying on research.